

California State Journal of Medicine.

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EDITORIAL NOTES

CALIFORNIA AND THE A. M. A.

Probably nearly fifty per cent. of the members of our State Society attended the sessions of the American Medical Association held in San Francisco in June. Up to the time of closing the registration on Wednesday night, for publication in the last Bulletin which was issued Thursday, 1064 of our members had registered. A good many registered on Thursday though the exact count could not be obtained on account of the hurry and pressure of closing things up. That is a mighty good showing, as we think you will admit. Also, it goes to show the wisdom of cutting out the annual meeting of the State Society, which would have been held in April, and encouraging our members to come to the more important meeting of the A. M. A. in June. The actual figures are not at hand, but it is very doubtful that any state in which the Association has met can show a registration of its home members running anywhere near the percentage in attendance at the San Francisco meeting. To all the members of the Committee of Arrangements, we owe our

thanks; Herbert C. Moffitt, Emmett Rixford, Sol. Hyman, William P. Lucas, J. Henry Barbat, George Somers and O. D. Hamlin all did splendid work, but if any single one might be particularly complimented, it would be the Secretary of the Committee, Sol. Hyman. It is a bit unjust, however, to thank only these few, for the sub-committees all did splendid work and no one who was called upon to help, failed to do his part most admirably. The entertainments were all enjoyed to the maximum of their several capacities and over two thousand people stayed over Friday in order to take the various trips which had been arranged. One wandering about and listening, heard very few kicks—fewer than could have been expected or than is usually the case. The total registration was something over 2300; at least 500 more than was estimated the week before the meeting, and a number which compares very favorably with registration in most of the eastern places of meeting. The women of the California Building are to be especially thanked for their generous and bountiful assistance in the matter of entertaining the visiting ladies and in cooperating with the male hosts of the California Building in arranging the President's reception. Altogether, California lost nothing of its reputation for hospitality and for its ability to handle a large number of people smoothly and well and to ensure their comfort and happiness. The committee collected \$4633 and has approximately \$1500 left over.

REMEMBER YOUR FRIENDS.

There was a time, not so many years ago, when no respectable publication would refer to its advertisements or its advertisers. To be sure, many items boosting advertised things appeared in some periodicals—mostly medical (?) journals—but these were what is known as of the "reading notice" variety; carefully prepared by the advertiser and furnished to the publication; they were run as part of the advertising obligation. Now, however, and largely through the influence of your own JOURNAL, all that has changed; we are proud of our advertisers and our advertising. Nothing goes into the advertising pages that is not as carefully scrutinized as the matter that goes into the reading pages. A considerable amount of advertising is refused each year because the JOURNAL cannot vouch for the statements or the standing of the would-be advertiser, or for several other reasons. There is no reason, now, why any advertiser should not be referred to or anything advertised should not be mentioned in any part of the JOURNAL. And please remember that these advertisers are your friends; they very materially help out the business of the Society by so liberally patronizing the advertising pages of your JOURNAL. They offer, for your consideration, a constantly

changing variety of things that it would pay you to take an interest in; there is always something new coming along, and it will be well worth your while to see, from month to month, what new things are set forth in the advertising pages. You can save money, you can learn a lot that will be of benefit to you, and not infrequently you can secure samples or catalogues or premiums that are of real value. Also, just remember that there is no "bunk" about anything we advertise; if you are not entirely satisfied with your transactions with any advertiser, the JOURNAL stands ready to straighten out the matter. The new things in this issue are too numerous to mention right here, but just look them up and see for yourself; if you have not looked through the advertising pages for a couple of months, it will surprise and please you to see the number and variety of new things and new suggestions set forth. The statements made and the information contained in our advertisements may be absolutely relied upon. Help your friends and those who help you. Read the advertisements in this issue.

PROGRESS OR RETROGRESSION?

The new way of spelling "progress" and "reform" seems to be "politics" and "retrogression." Cheap politics mixed into medicine makes a pitiful mess, and especially when it comes to public health matters; for the people understand the importance of, to them little things, so not at all! Two glaring instances of almost criminal disregard for good public health effort and almost complete reversal of form—downward—have recently come to our attention. Real reform would be too much of a blessing for mere mortals ever to have; only in the fair land of Utopia, probably, does reform mean what it says. Here it means only a change of political manipulation and control. In Sacramento, Dr. Williamson was appointed a full-time health officer because of fitness; and he displayed that fitness by reducing the scandalous prevalence of typhoid fever in Sacramento. Due to his efforts, the typhoid morbidity rate was materially lowered. But that was too good for Sacramento. It was suddenly discovered that a mistake had been made; that the health officer should be a "local man"! Petty politics; a place; a job; some votes for someone; a "local man" means patronage and nothing but patronage. And the people of Sacramento will doubtless pay the bill with a few lives; but somebody gets some votes. Oakland is another tearful example of "reform" spelt "retrogression." After going through the throes of an examining commission, the working over of many applicants for the position of health director and the final appointment of Dr. Gillihan as such director after a competitive examination, comes a "reform" wave that changes the political complexion and the abolishing of the position of "health director" (and Gillihan) to make place for a "health officer"—to make jobs for the "push." Everything seems to be a "local issue," from the practical politician's point of view. San Francisco is a big city but it does surprisingly small and

asinine things. It holds examinations for high grade technical positions, like that of health officer, etc., and confines the entries to "local men"! What has ability and what has efficiency to do with place of birth or residence? Is it better for all the people to have an incompetent health officer who resides—and votes—in the Nth ward, or to have a trained health official who comes from Milpitas or some other place? Universities all over the country are establishing schools in public health with the object of turning out properly educated and trained health officers. But what is the use of this praiseworthy effort if the health officers who do good work are to be treated as Williamson and Gillihan have been treated? These men have done splendid work and against odds; and now they are severally thanked for their effort in the public welfare by being thrown out by a bunch of practical politicians! If we, as physicians, did not know that the people pay the bill of petty, practical politics with their lives, it would be to laugh; as it is, it is enough to make a thoughtful citizen almost angry enough to commit a few murders—of "practical politicians." What is the use of a civil service system with technical appointments based on determined efficiency, when an Oakland will, the first trick out of the box, upset the whole thing and return to the "spoils system"? If this sort of thing is "reform," by all the Gods let us have something, anything, else!

PUBLIC HEALTH DAY.

When the plans for the Public Health Commemoration Day, Wednesday, June 23rd, were being formulated, some anxiety was felt that but few would attend the lectures and demonstrations and that the effort might prove a failure in that regard. The result, however, was remarkable. Of course it is impossible to say how many people attended these lectures and demonstrations and inspected the exhibits, but a conservative guess would be 15,000. All day long the huge Auditorium was crowded with quiet, inquisitive, interested laymen. The lecture rooms were filled to overflowing and other rooms and other speakers had to address the people who came to learn. Never an hour during the day but groups of people could be found gathered about the exhibits, thoughtfully studying them or listening to the demonstrations. It was an object lesson in the interest of the public in health matters and one worthy of careful consideration. We respectfully make the suggestion that the Association carry on the plan and make it a permanent feature of the annual meetings, in so far as possible; just as the Sunday talks in the local churches has become a regular feature of the annual meetings. Either Monday or Friday might be well used for this purpose. No one who saw the crowds in the Auditorium that Wednesday, could fail to be impressed with the sight—and its significance. The JOURNAL makes the suggestion for what it is worth.

DO NOT PRINT YOUR LICENSE NUMBER.

While, so far as we know at the time of writing, no rule on the point has been made by the Internal Revenue people, it is announced as being undesirable that physicians print on their prescription blanks the number of the federal license issued under the Harrison law. Blanks with the number printed on, might easily be stolen and a name forged and the prescription taken to some drug store where the signature of the physician is unknown. In all probability, if many physicians do have their number printed on the blanks, a rule will be made to stop it, and so it is just as well not to do what we are advised would be objectionable. The law is a good law and it is working out well and smoothly; we should do everything in our power to help in the administration of a measure that will do more than we ever could to prevent the refilling of dangerous prescriptions and the unlawful sale of what we know better than any other class to be the most dangerous and destructive of drugs. It is not the letter nor the spirit of the law nor the purpose of its administration to hamper, in any way, any physician in the regular and legitimate practice of his profession; it is merely intended to stop the commercialization of drug vice.

HEALTHY GROWTH IN CALIFORNIA.

Every three years, according to the by-laws, the House of Delegates of the A. M. A. appoints a committee on reapportionment, which committee goes over the membership returns of the several state associations and determines the number of delegates which each state shall have for the next succeeding three years. This was the year of reapportionment and the report of the committee made but two changes; California was given one more delegate, so for the next three years we shall have four delegates and not three, as previously. This is indeed a pleasant thing to record, for the effort to strictly scrutinize all applicants for membership in our county units as so strongly recommended by the House of Delegates of the State Society at its last meeting, is being distinctly felt. During the month of June three applicants whose names were sent in to be investigated, were refused membership for good and sufficient reasons. Again let the recommendation be urged, that no county unit elect an applicant to membership until after his name has been sent to the office of the State Society for a report. Unfortunately, all our county units have not adopted this procedure as a routine and so occasionally it is necessary to enroll the name of some person who would never have been elected had the members of the county unit been in possession of the facts in the applicant's history. We have for years been compiling this information; but it is held strictly private; it is never given out except in proper circumstances and to authorized individuals; it is never permitted to be used merely for the purpose of "knocking" anyone.

NARCOTIC DRUGS IN HOSPITAL USE.

The following correspondence with the Acting Commissioner of Internal Revenue clears up a point on which there has been a good deal of discussion and inquiry; that is, how the Harrison law applies to the use of narcotics ordered by the attendant physician for a patient in a hospital:

DR. JAMES H. PARKINSON,
1005 K Street.

May 11th, 1915.

Hon David A. Gates, Acting Commissioner of Internal Revenue, Washington, D. C.

My Dear Sir—My attention was called, to-day, to a ruling of yours in relation to records in hospitals. Enclosed sheet, which is copied from the Uniontown, Pennsylvania, Hospital, has, I believe, met with your approval. I fully realize the difficulties of putting the law into operation and, as far as I can see, the greatest difficulties will arise in connection with hospital administration. I should like a ruling on the following points:

1. Given a case in hospital in which it is necessary to administer sedatives, once or twice or as may be required, directions for same to be entered on the chart. What is the most simple procedure that will be permitted under the law? For your guidance I enclose a chart with the form that I have always followed. Is this permissible? If not, what will be necessary to make it conform with the law?
2. Is the usual business signature of a physician sufficient or must he, as appears to be required, write his name in full?
3. In a case in private practice where a nurse is in charge and where it is necessary to give sedatives hypodermically, I have ordered the hypodermic tube as a prescription and have written the usual directions. These have been modified verbally to the nurse or noted on the chart, according to circumstances. Is this sufficient?

These rulings will be furnished to the local Society and published in the JOURNAL of the State Society, of which I am Councilor for this district.

Respectfully,

(Signed) JAMES H. PARKINSON.

TREASURY DEPARTMENT, WASHINGTON.

Office of Commissioner of Internal Revenue.

In replying refer to

M-n 0614.

Narcotic Laws.

May 26, 1915.

Dr. James H. Parkinson, 1005 K Street,
Sacramento, Cal.

Sir—Replying to your letter of May 11th, enclosing a form of record of narcotic drugs you desire to make use of in the Mater Misericordiae Hospital, at Sacramento, Cal., you are advised that this form, provided the total amount of narcotic drug administered to each patient is indicated thereon at the time the patient is discharged and before filing with the pharmacist or other person in charge of the duplicate order forms, meets the approval of this office.

The initials or signature of the physician under whose direction the narcotic drugs are administered

should appear on each of these sheets.

What the Government desires is a record of the kind and quantity of narcotic drugs administered to each patient in such institutions as will balance with the record of drugs received as indicated by the duplicate order forms on file.

Respectfully,
(Signed) G. E. FLETCHER,
Deputy Commissioner.

MATER MISERICORDIAE HOSPITAL.
Nurse's Clinical Record.

Dr. James H. Parkinson. No. 1.
Patient, Mr. X. Room 17. Date, May 12, 1915.
If in pain give 1/16 M. Sulph. per hypo and repeat in 4 hours if necessary. J. H. P.

Give M. Sulph. 1/24 to 1/16 when necessary to relieve pain. J. H. P.

Give 1/4 gr. M. Sulph. per hypo. If this does not seem to relieve, repeat in one hour. Nothing further without orders. J. H. P.

Prepare patient for operation (appendix) 10 a. m. tomorrow. Usual hospital operative preparation. J. H. P.

This last ("usual hospital operative preparation") will include a hypodermic of quarter grain, Morph. Sulph. at 9:30 a. m.

DR. RODMAN AND "THE COLLEGE."

Why Dr. Rodman should have dragged into his presidential address some laudatory remarks about the American College of Surgeons is a mystery, but it is none the less a fact that has excited a good deal of adverse comment. It does not matter what the college is or what it stands for or what it has done or what it is going to do or what it thinks it is going to do; it has nothing to do with the American Medical Association in any way whatsoever. This college of surgeons is a purely voluntary, proprietary organization of men who brought themselves together for stated purposes; they may or they may not attain those purposes; but that too has nothing to do with the case. It seems clearly out of place to announce an intention of discussing the work of the American Medical Association and then proceed to talk about an organization which has nothing to do with the Association. And the criticism of this proceeding was not confined to outsiders; not a few members of the college itself were very free in their words of adverse comment.

THE MEDICAL PERIOD.

The period from June 14 to 28 was set aside by the Exposition people as a sort of general medical period and a very considerable number of medical and kindred organizations met in San Francisco at that time. In addition to the American Medical Association, there was the important meeting of the Pan-American Medical Congress which was called on the invitation of the President of the United States as authorized by act of Congress of March 3, 1915. The Congress is officially composed of representatives from the following countries: The Argentine Republic, Bolivia, Brazil, Canada, Colombia, Cuba, Chile, Costa Rica, El Sal-

vador, Ecuador, Guatemala, Honduras, Haiti, Hawaii, Mexico, Martinique, Nicaragua, Panama, Paraguay, Peru, Santo Domingo, United States, Uruguay, Venezuela, British Guiana, Dutch Guiana, French Guiana, Jamaica, Barbadoes, St. Thomas and St. Vincent.

Non-affiliated societies convening also in connection with the Panama-Pacific Exposition were the Pacific Coast Oto-Ophthalmological Society, June 14 to 16; American Society of Tropical Medicine, June 14 to 16; American Association Medical Milk Commissions, June 17 to 19; American Climatological and Clinical Association, June 18 and 19; American College of Surgeons, June 21; American School Hygiene Association, June 25 and 26; American Association of Medical Examiners, June 21; American Therapeutic Society, June 21 and 22; American Proctologic Society, June 21 and 22; American Hospital Association, June 21 to 25; Medical Association of the Isthmian Canal Zone, June 23 and 24; Pacific Association of Railway Surgeons, June 25; American Academy of Medicine, June 25 to 28; June 20 to 27, the Nurses' associations, consisting of The National League of Nursing Education, California State Nurses' Association, American Nurses' Association, and the National Organization for Public Health Nursing.

MERELY MONEY!

How ingeniously pathetic is the average business man! Money is the God of all Gods; the incoming of capital is to be rejoiced at regardless of its use or its origin or anything pertaining to it except the ring of the cold metal! The Law brothers are still respected citizens, directors of banks and Y. M. C. A.'s, unless there has been a change, and no business man with whom they associate seems to object to the fact that their large monies are about as clean as the small monies of the pimp, the panderer and the white-slaver. And now comes the "Monthly Bulletin of the California Development Board" announcing with the fatuously childish joy of a business man, the wonderfully gratifying fact that a factory is to be established in Los Angeles for the purpose of the local manufacture of—Coca Cola!!

GOOD LEGISLATORS—AND OTHERS.

It has reached the attention of the JOURNAL that some members of the last legislature who stood for better medical legislation have felt somewhat disturbed or annoyed because of our mild criticism of the net result of legislative effort. No single legislator who stood out for higher medical standards or for not reducing medical standards has any reason to feel hurt. Certainly the Society and all its members are grateful to all such for having done their duty by the people of the State of California. The contention of the JOURNAL was not that all knew better and did wrong, but that most of those who opposed high standards or who stood for reducing standards of medical efficiency for licensure, knew better. Nearly every

man who goes to the legislature is sufficiently intelligent to know that good and well trained doctors are better than quacks, freaks and half educated healers of various sorts. Those who are not, can very easily and with little effort, place themselves in full possession of the facts. If, then, they wish to be guided by facts and work for the good of the people, they may readily do so; if they wish to be actuated by a collection of freaks, quacks and persons who desire to destroy the people's protection because these elements are among their constituents, why that is a different matter. There is no good reason why we, as a profession and as an organized profession, should go to the legislature and beg for anything. *We* do not need protection, but the people do. If it is the wish and the will of certain legislators to remove the protection which just medical laws and high standards for medical licensure give to the people of the state, the responsibility is up to them; they cannot avoid it; they cannot plead ignorance, for enlightenment, if they need it, will come with the request for it. But we firmly believe that most of those who vote to lower standards and to allow any old sort of freak to treat the sick or injured citizens of California, do so with their eyes open and to placate some of their constituents at the cost of the welfare of the whole people. Merely as citizens who understand, we extend our thanks to every member of the last legislature who worked or voted for proper medical standards, no matter what the result. It is difficult to see how anyone who stood right, worked right and voted right in the matter of medical legislation, could take offense at anything which this JOURNAL has ever published. But if there should be any such, to him or to them the JOURNAL expresses its sorrow that such offense should have been taken where none was intended.

VANDERBURGH AND THE "HOG-TIGHT FENCE."

An interesting letter has been received from W. W. Vanderburgh, D. O., an Osteopathic member of the State Board of Medical Examiners, which we take pleasure in publishing herewith. Upon the receipt of the letter, we wrote to the secretary of the board asking for the portion of the minutes giving the action referred to by Vanderburgh as having removed a section of the "hog-tight fence," by which expression he probably means the medical practice act. The expression is a good one, as we shall presently see. The secretary of the board said in reply that he could not tell from Vanderburgh's letter what particular action of the board was meant. Are we to assume from this that the board has taken a number of sections from the "hog-tight fence"? So many that it is not possible to say to which one Vanderburgh refers? One can hardly believe that this is the case for it is known that many of the board are doing their best to preserve as much of the efficiency of the protective law as they possibly can.

For some years the medical practice act was indeed a "hog-tight fence"; it kept out most of the hungry and heartless hogs who would so much have liked to get inside the state and take away the money and the lives of our citizens. The "hogs" of the various cults and "schools" and "drugless" and otherwise healers; the "hogs" of the diploma mills; the "hogs" who professed to want to do nothing but manipulate with a special God-given knowledge that did not need medical or anatomical training for its beneficent manipulations; the "hogs" who know so well how easy it is to get money from sick, and especially hopelessly sick, humanity. These, all and several, the "hog-tight fence" of the medical practice act kept from preying upon our people. It was a good and strong and securely protective fence against these "hogs" of ignorance and greed and graft and money-lust, and we are glad to see that Vanderburgh recognized it as a "hog-tight fence" and that it really did keep out these "hogs" of various sorts. But why his thinly veiled joy at helping, as a member of the board, in taking out a whole section of this "hog-tight fence" of protection? How have the innocent and unknowing people of California offended Vanderburgh so that he rejoices at his part in removing some of their protection against the "hogs"? Have they offended Vanderburgh, as the people of Israel offended the Lord, and so must have this pest of "hogs" turned loose upon them? Can it be that Vanderburgh is acting as a member of a board whose duty it is to protect the people and at the same time helping to destroy the people's protection and let in this horde of hungry "hogs"? The situation seems to be preposterously anomalous; and yet, there—or here—is his letter, in word and in tone implying that he has helped to take out a section of the protective "hog-tight fence" and rejoicing, apparently, in the letting in of more of these "hogs" for the spoliation of the unhappily sick, trusting, credulous people of California!

San Francisco, Cal., June 24, 1915.

*Editor California State Journal of Medicine,
San Francisco, California.*

Dear Doctor—In a recent issue of your JOURNAL you commented upon my affidavit which I made with reference to propositions submitted to me by Dr. Alderson at the time that he was chairman of the College Investigation Committee of the State Board of Medical Examiners. You virtually stated that my affidavit was false.

You state that Roosevelt would use a shorter and uglier word if commenting upon my affidavit. Assemblyman Gebhardt, chairman of the committee, after hearing both sides of this argument, did use the shorter and uglier word but he applied it to the other party at issue. Gebhardt explained that notwithstanding his belief in my statements, he would vote against us as he believed that "the tail was trying to wag the dog."

You say that when the smoke has cleared away the "protective fence" built up around California by the medical profession will probably be "shot full of holes." The Board of Medical Examiners, at its meeting held in San Francisco last week, by

a vote of seven to two removed a panel from this previously hog-tight fence.

This action of the Board, taken upon a report submitted by a committee which was appointed by Dr. Alderson, is sufficient refutation of the previous report written by Dr. Alderson to thoroughly satisfy us.

The statements made in my affidavit were true in every detail. In view of the facts in the case you are requested to correct the impression that you endeavored to create in the editorial referred to.

Very truly yours,

W. W. VANDERBURGH.

SOME TYPICAL EXPERIENCES WITH SYPHILITIC PATIENTS.*

By VICTOR G. VECKI, M.D., San Francisco.

The histories of the cases selected each represents a group of cases treated in a different way.

There is no doubt that every single case of syphilis ought to be treated in the best way there is, or in my estimation treated about as well as cases six, seven and eight, related in the present report. Unfortunately, and as every syphilologist knows only too well, there are many conditions which prevent physician and patient from carrying out the best and ideal treatment in many a case.

Every person of any intelligence when told to be afflicted with syphilis declares at once the intention to do all possible to fight the evil, nothing would be too much, etc. But most of them relent in their zeal so soon as they see themselves free from any symptoms, and think themselves in perfect health.

Case 1. The employee of a brewery, 34 years old, came under treatment in October 1906 before secondary symptoms appeared. He was given energetic treatment ten months long in the form of intramuscular injections of sublimate, and then stopped the visits to my office. Recently I met him on the street and asked him what he did for his syphilis since; he just laughed, asking me why should he do anything when he felt so well? And when I reminded him of my instructions, and how I told him when he had to return for treatment, he just smiled knowingly, telling me: "I know what you told me, I know that doctors want the people to be sick all the time, I know; but I am well; come let's have a drink." How could I insist further when he was so sure that I wanted him to return for treatment for my own benefit? I only hope he will not be compelled to resume treatment for a central nervous system involvement.

Case 2. A saloonkeeper's wife, age 36, was infected some time in April 1911, but presented herself for treatment June 30th of the same year, when secondary symptoms were well established, and she had been treated by another physician several weeks long for ptomain poisoning.

She was given intense intermittent and combined treatment, and had up to March 1913:

- 29 Intramuscular injections of sublimate.
- 10 Intramuscular injections of salicylate of mercury.
- 8 Intramuscular injections of calomel.
- 3 Intravenous injections of salvarsan; and was given for six weeks, potassium iodid.

The patient contracted an acute bronchitis about March 13th, 1913, and March 23d she developed

meningeal and cerebral symptoms, partial oculomotorius paralysis, stupor, delirium, vomiting and stiffness of the neck. Conditions became worse and the patient was taken to the Mt. Zion Hospital. Four daily intramuscular injections of sublimate brought only slight improvement. April 6th she was given an intramuscular injection of 40% calomel and began to improve immediately. These injections were kept up intermittently until the middle of September, though the patient was able to leave the hospital April 10th. She had five injections in April, four in May and four in August and September.

Mild cerebral symptoms, however, persisted, and the Wassermann reaction, taken October 2d was strongly positive.

At that time I was urged by the manufacturers to use the Mer xx, or as it was also called the Twenty-Day Treatment.

After explaining to the patient all I knew of that new remedy she consented to try it and from October 4th to 17th took 14 daily doses, when severe symptoms of mercurialism developed, with frightfully deep ulcerations. For three weeks the patient was unable to eat, and several days could only swallow a few drops of liquid at a time. In spite of rectal-feeding she became a real skeleton-woman, and was several times near collapse, the exitus lethalis was momentarily expected.

Careful nursing and painstaking local applications saved the life and after three terrible weeks the patient began to improve rapidly. All symptoms of cerebral and dermal syphilis disappeared. By Christmas she weighed 30 lbs. more than November 5th and 10 lbs. more than before the time of infection with syphilis. Today she is still in perfect health, working hard, free from any symptoms and refusing any further treatment. Last Wassermann reaction made Feb. 17th, 1914, was weakly positive.

Case 3. Husband of case 2, 40 years of age, came under treatment September 6th, 1911, with early secondary symptoms. The following day he was given an intravenous injection of salvarsan. All symptoms disappeared inside of six days. The patient had no treatment whatever since, and though drinking hard at times, he remained in good health. Two blood examinations, he took in 1913, when the condition of his wife frightened him, were negative.

Cases 4 and 5. A broker 30 years of age infected his bride in 1904, after thought to have been cured by a few poorly performed inunctions of grey salve. I gave her before and up to our little earthquake and big fire a great number of intramuscular injections of sublimate. As the records were burned I can only estimate the number of injections, but as small patches in the mouth persistently reappeared she had at least 250 injections given daily for from 36 to 40 days, stopping for one to four weeks, when symptoms would reappear and help me to persuade the patient to continue treatment. She complained bitterly against the injustice of Heaven, as she termed it, that she should suffer so persistently, and her husband, who was the guilty one, was perfectly well after having taken only 48 injections, and being able to refuse further treatment, using the excuses of perfect health and always pressing business.

The tables are turned now, however. The yearly blood reactions taken for the last five years are always being negative for her and positive for him. She is free from any symptoms, while he suffers from ambliopia, and I am afraid is showing lately suspicious symptoms of a beginning paralysis. She was given no treatment since 1909, and he is compelled by symptoms to take desultory treatment from time to time. Five intravenous injections of neosalvarsan and 24 weekly injections of calomel were given to him since Feb. 9th, 1914, and he had to be dragged to every one of his treatments unless the symptoms were really alarm-

* Read before the Urological Section of the San Francisco County Medical Society, March 30, 1915.

ing. I am now trying to persuade him into intraspinal injections.

Case 6. An intelligent German workman came June 27th, 1911, with a typical primary induration. He refused from the beginning to take the 606 on account of a prejudice and has not changed his mind since. Otherwise he was most faithful to the treatment. From June 27th to September 11th he was given 12 weekly intramuscular injections of hydrargyrum salicylicum, then from October 30th to December 26th, 8 weekly intramuscular injections of calomel. From Feb. 17th to April 15th, 1912, again 8 intramuscular injections of the salicylate, from September 2d to October 21st eight of calomel, from Jan. 6th to Feb. 24th, 1913, 8 of salicylate, from May 26th to July 14th again 8 of salicylate. July 28th, 1914, blood-reaction negative. Same result November 2d upon which I was tempted to think that mercury alone is superior to combined treatment, when unmistakable cutaneous symptoms appeared Feb. 8th, 1915, and promptly disappeared after the patient was given two intramuscular injections of Roger's 40% of grey oil. These injections are still being given once a week.

Case 7. A boy aged 18 from a good and wealthy family was infected in the spring of 1903. A friend of the family came with him to my office, and the boy was given the necessary instructions and energetic intermittent treatment by daily intramuscular injections of sublimate. The last active symptoms in the form of small mucous patches in the mouth appeared in Feb. 1907. The patient then began to forget his disease. August 31st, 1911, his blood was examined, as he wished to get married; the report was negative. He married, but decided to avoid the begetting of children. May 23d, 1913, he wished that his blood be examined again, as his wife was longing for a child. The report was again negative. In the fall, 1914, the wife gave birth to a strong and healthy child.

March 2d, 1915, the patient came again with mucous patches in the mouth, the blood was examined and found triple positive. An intravenous injection of neosalvarsan promptly made the patches disappear, but the injections are being continued once a week.

Case 8. Another scion of a good and wealthy family was also infected in 1903 and was treated by a very experienced physician by inunctions for three years, when he was turned over to me. The patient was fully informed in regard to the disease and demanded and obtained energetic and diligent, though always safe treatment, intermittently for five years more. March 22d, 1911, his blood was examined the first time and found negative. May 8th, 1912, blood proved slightly positive, and May 11th an intravenous injection of salvarsan was given. August 13th the blood showed Wassermann slightly positive, Noguchi negative. After having been given another intravenous injection of salvarsan the patient had to go abroad, and the blood was not examined until Jan. 20th, 1913, when it was found negative. September 18th, same year, blood again negative. But on account of the lessons learned the patient was given November 24th an intravenous injection of neosalvarsan. Blood examined again March 17th, 1914; the patient wished specimens to be sent to two different laboratories: both reported negative findings. Same result August 20th of same year, but in spite of that another intravenous injection of neosalvarsan was given.

Case 9. Feb. 9th I saw a fruit-dryer 42 years of age at Dr. Albert Abrams's office. He was sent there the day before by a physician from the northern part of the state with the information that he was being treated for over a year long by several physicians of prominence for nervous prostration from overwork, that several blood exami-

nations were made, but Wassermann as well as Noguchi were always negative.

The patient presented various signs of progressive paralysis. The Argyll-Robertson was present in the right eye; there was pronounced dysarthria and exaggerated Romberg symptom so that patient was unable to stand for one single second with eyes closed. Extreme bodily weakness and emaciation. Height 6 feet 1½ inches, weight 130 lbs.

Feb. 10th the patient was given an intravenous injection of neosalvarsan, 25 minutes after 60 c.c. of blood were withdrawn, and Feb. 11th 20 c.c. of salvarsanized serum, carefully prepared by Dr. Dorn, were injected intraspinaly.

The examination of the spinal fluid confirmed the electronic test, Noguchi and Wassermann both being positive.

Four days after the first intraspinal injection, the clinical symptoms began rapidly to disappear.

The treatment was repeated March 1st, 25 c.c. salvarsanized serum being injected on the 2nd and again March 11th, when on the 12th 30 c.c. were introduced.

Each treatment was followed by a slighter reaction than the preceding one, and as the patient improved in every respect, having gained 14½ lbs. in bodily weight, he was given on March 19th and 26th intravenous injections of neosalvarsan but no further spinal injections.

The patient, who before treatment was under constant care of a nurse, comes now to the office unaccompanied, and is well to every practical purpose.

The electronic reaction for progressive paralysis disappeared, the spinal fluid examined on March 12th was reported by Dr. Dorn: Wassermann negative, Noguchi only cloudy, not positive. Abrams's electronic general reaction for syphilis, however, persists, as usually.

There is no advantage in drawing any bombastic conclusions, but experience teaches again and again that I was surely right when I dared to affirm in April 1913 that: In order to be absolutely safe the syphilitic must be watched and eventually be treated the balance of his life. The patient and the physician must be aware of this fact.

Discussion.

Dr. Alfred B. Grosse: I have little to add to the subject matter of this paper and in the main naturally agree with most of the conclusions arrived at, but will point out a number of points that should not go unchallenged or at least without further illumination and discussion.

Dr. Vecki and I agree practically concerning treatment but whether I have been more fortunate or have had a better type of material, at any rate, my prognosis is far more optimistic as borne out by my results even in the pre-salvarsan days. It is, of course, essential to have full control of your patient so you will have him under observation for a long period of time, but a pessimistic prognosis as given by Dr. Vecki I'm afraid, will, in many instances, have the effect of causing syphilophobia or to make the patient indifferent to treatment on account of hopelessness. This point is a matter that is up to each medical man and must be handled according to the mental attitude of the individual patient. I have had very few reminders in my cases as I always was a disciple of the chronic intermittent treatment method, insisting on inunctions and grey oil injections.

Now as to the advisability of treating cases of lues dating back many years, at least 10, in which no symptoms have ever appeared but in which strongly positive Wassermann reaction was demonstrated, this being elucidated simply because patient had heard of the efficacy of blood test. I strongly lean in the direction of leaving well

enough alone, if spinal fluid is found negative to the various tests. These cases in spite of energetic treatment are hardly influenced in their positive reaction and as the subjects are no longer young, salvarsan and effective mercurialization are under these circumstances not indifferent methods. The hazard of treatment seems to me the greater of the two.

I would like to ask Dr. Vecki if his patients do not complain of great pain following his calomel injections. There is no question that this is the most efficacious mercurial salt. But my experience with the injection treatment of mercury has been that some patients could not stand it at all (young women) or complained bitterly and if possible evaded more treatment, so that I welcomed exceedingly the advent of a painless grey oil which has been satisfactory to all my patients for a period of nine years or more and has rendered unnecessary the very disagreeable inunctions.

In the cases where Hg is badly borne and where salvarsan has lost its effect and the patient is losing weight rapidly, 25% iodipin intramuscularly in doses of 20 c.c. daily until from one-half to one pound has been administered, will act magically and with a several pound increase in weight, will prepare the patient for Hg treatment which will now be satisfactorily borne.

Last but not least, we, who regard ourselves as specialists should endeavor to standardize our prognosis and our therapeutic demands at least to a certain degree. A syphilitic consulting a number of authorities gets as many different opinions. Ultimately the public will look with suspicion on this branch of the profession and we will be ourselves to blame if we lose the confidence of our patients and incidentally lose the chance to aid in the stamping out of this disease.

Dr. William E. Stevens: I was disappointed this evening in not hearing the important subject of intra-spinal treatment mentioned to any extent. This method is one upon which there is still much to be said. I have seen cases of syphilis of the nervous system which showed marked improvement following the intra-spinal injection of salvarsanized blood serum according to the Swift-Ellis technic while on the other hand very similar cases treated in the same manner have shown no improvement whatever. Faulty technic is without doubt responsible for many of the failures as well as for results disastrous to the patient. Two cases of death following this method of treatment were called to my attention today. In one only fifteen c.c. of spinal fluid were withdrawn whereas thirty-five c.c. of salvarsanized serum were injected. The patient died two hours later. Autopsy showed cerebral hemorrhage. In the other case a large quantity of air was injected into the spinal canal. The patient died two and a half hours later. No autopsy was obtained. Another error is in the use of a serum that has not been properly centrifugized but remains more or less turbid. Lastly I consider it a mistake to introduce into the spinal canal a salvarsanized serum which has been prepared from the blood while the Wassermann is still positive and especially so in those frequent instances of syphilis of the nervous system where the Wassermann examination of the spinal fluid is negative. If these and other errors of technic were avoided the number of failures with the Swift-Ellis method would be much smaller.

Dr. H. J. Nichols, U. S. A.: I certainly have enjoyed this paper and the discussion because it brings out much of interest to a man working with syphilis. Some of us are more interested in the laboratory side and others in the patient. Sooner or later we must all get together on the subject.

Personally, I must say I feel that we cannot consider a patient cured who still has a positive

Wassermann reaction. From the point of view of infectious disease, he is still infected with spirochetes. The history of paresis is very instructive on this point. In paresis we find a very strong reaction which we did not understand until spirochetes were found in the brain. Similarly spirochetes may be in the blood vessels and give no sign of disease. It would take a very clever diagnostician, I believe, to detect an early case of aortitis due to syphilis. Even healthy children are no proof of the cure of syphilis. A man may not have a localization of spirochetes in the testicle, but have them in the aorta.

I think a great many of us are coming to feel that without spinal puncture there is no way to be sure that a patient has not a beginning involvement of the nervous system. We aim to make spinal puncture in all of our cases of syphilis at the Letterman Hospital and are somewhat surprised to find so many suggestions of trouble. In early cases the cell count is often above normal and the other tests are on the border line. Of course that may not always mean a localization or direct infection of the nervous system, but it raises that point, and I do not believe we are going to be able to tell a patient that he is free now and can go ahead about his business, without having a spinal puncture. At a meeting here a month or two ago, someone objected to this measure, saying that it was a major operation and should not be done except under great provocation. But those of us who do much of this work feel that it is a minor affair and I think we ought to encourage the idea that spinal fluid examination should be done as a part of the routine treatment of syphilis. In regard to salvarsanized serum I feel that it has a distinct field of usefulness in tabes and cerebral syphilis. In paresis there is not much encouragement. But in many cases we should go to the seat of the trouble. Of course all sorts of errors are going to be made, but those things correct themselves in a year or two.

I think we ought to have some general professional attitude on syphilis, but I don't know how we are going to get it except under the laboratory point of view. I feel that we have the best of it and that the other side must come over to us a little more.

Dr. Louis Gross: Both Drs. Nichols and Craig have done a great deal of work in the United States Army, and feel proud of the work they have done in syphilis. It is really remarkable, if you read their reports, to see the wonderful work that they are doing. And I think that it will not be long before the army gives us a great deal of knowledge, especially on the subject of syphilis.

In regard to the case that Dr. Grosse mentioned, I cannot understand how any syphilographer can give a man permission to marry on a positive Wassermann. It is better to err on the safe side than on the unsafe. I do not feel that any physician has a right to give a man with triple positive permission to marry. I think Dr. McGowan of Los Angeles is right in refusing permission even though you do make syphilophobiacs of these patients.

In one case a young man who had been treated for chronic gonorrhea said to me on December 15th of last year, "Tomorrow I am going to ask a young lady to be my wife, I expect to marry in six months." I suggested to him the advisability of having a Wassermann test. He said, "Very well, but you know and I know that I haven't had syphilis." The result was triple positive from one laboratory. I rang up this laboratory and told them to make a re-examination, which they did. The result was triple positive! That was December 15th. On December 16th, I took blood and sent it to another laboratory and they gave me the report of negative. The next day I took two bloods and sent them to the first and second laboratories. One gave me Wassermann X and

Noguchi X and the other laboratory still insisted upon negative. I then proceeded within a few days to give a provocative Wassermann and examined the blood twenty-four hours afterward, and as I stated to you, I found twenty-four hours a little too early. The laboratory came back with a finding of negative. Six days later I sent it again to the same laboratory with the result of Wassermann XXX. This was a young man of twenty-four years of age. The father was dissatisfied and sent the boy to Dr. Alden. Dr. Alden in turn examined him. I have neglected to say that there were no symptoms. Dr. Alden sent him to Dr. Hogan, who not only examined the blood himself, but also sent a specimen to another laboratory. Dr. Hogan returned a report of Wassermann XXX. And the other laboratory gave Wassermann XX. So, gentlemen, I say this, it may be that we have not second-sight to see that these patients have clinical symptoms, but there is something in these patients when they give triple X. I feel that the time will come when we shall be more acute in the study of these cases. Some symptoms we cannot see or feel, yet I feel that it is absolutely wrong to give a man the right to marry when he has a Wassermann XXX. I may be wrong, but time has got to prove that I am wrong. It is far safer to make a mistake on that side than on the other side.

In reference to the doctor wanting to know if salvarsan is indicated in the practice of medicine? I consider salvarsan a wonderful remedy, and think the man who is not using salvarsan today is not doing justice to his patients.

Dr. Vecki: The claim that physicians are creating syphilophobias may be justified sometimes, but as far as I am concerned, I must plead not guilty, because I try to inspire my patients with all the hope there is; in fact, I make them understand that, while syphilis is a serious trouble I am positive that it is curable. And I really believe it is curable, though we never know when it is cured. We are today in the same position we were years ago before we had the Wassermann; all we can say to the patient is: "To all appearances you are cured, but we cannot be positive about it. You will have to be watched." And therefore I do not say a syphilitic must be treated all his life, but he must be watched; and I think it is better to watch a patient and eventually treat him than to allow him to go to meet with progressive paralysis or with tabes.

It is breaking into open doors when anyone emphasizes that clinical findings are beyond the laboratory: When we see syphilis we don't need a Wassermann, but when we don't see it and when we have any doubts in any respect, then we need that Wassermann very badly.

In regard to intra-spinal injections, Dr. Stevens mentioned that nothing was said about it. I reported one case. I am positive there is absolutely no danger either in withdrawing spinal fluid or in the properly made intra-spinal injection. Of course, you have to be sure of the mode of preparing your fluid, and you have to know how to inject it. Dr. Stevens mentioned also that it was a mistake to inject salvarsanized serum intra-spinally when the blood was positive. If blood and spinal fluid are negative, then there is surely no necessity of any injections. It is my personal experience, however, that there is no danger to give an intra-spinal injection with a salvarsanized serum prepared from a blood that gave a positive reaction. We must look for the danger in other directions. Dr. Grosse asked about the painfulness of calomel injections. In answer I will say: If you use a 40% calomel suspension, you give it in small doses, only one-quarter of a c.c.; and if you know what preparation you have, and use a special syringe for that purpose there is never much

pain. Formerly, when we used a 10% suspension we had more pain, but it was never so that a man could not stand it easily. At that time I had a patient who was driving a milk wagon and he told me it was not an easy task, but he managed. I think when we really need calomel, we should give it, without regard to pain.

NOTES ON ANGINA PECTORIS.*

By DR. WILLIAM WATT KERR, San Francisco.

Angina pectoris, like ascites and dropsy, is a term used to designate a group of symptoms which probably are consequent upon a number of morbid changes reacting upon one another, but the exact inter-relationship of which we do not at present understand. Yet the group is one of such importance and severity that it requires special treatment, and consequently angina pectoris is most frequently mentioned as if it were a disease.

The term originally meant a sense of suffocation, strangulation, or constriction in the chest, but this condition is so frequently overshadowed by the most intense and agonizing pain that popularly the first signification is almost forgotten, and pain is the idea suggested to the mind when the words are spoken.

Additional difficulties have arisen from poor classification of the cases. The attempt to divide them into true and false angina is a mistake, because it does not matter whether the attack is found to be associated with organic changes, reflex or emotional nervous disturbance, or toxic conditions, the same subjective sensation is present in all of them; consequently, it is better to abandon the term "pseudo-angina," and regard all cases presenting these particular symptoms as different degrees of angina pectoris.

Angina pectoris is therefore a symptom of cardio-vascular disturbance, just as tachycardia is another indication of various disorders in the same system. Seeing that we know so little about the etiology of this malady, and that all we are certain of is the presence or absence of certain symptoms, it would seem that the only warrantable classification at the present time must be upon this basis, and hence the subject is frequently divided into painful and painless angina.

The painful variety is the more common, and the chief symptoms are pain in the region of the heart or sternum, which may radiate into the neck, jaws, arms (especially on the left side), as well as into the epigastrium and abdomen. With these is a feeling of constriction, or oppression over the chest. The pulse may show evidence of high tension or it may be unchanged; and occasionally there is bronchial spasm, as demonstrated by asthmatic wheezing.

In severe cases the face is pallid and covered with sweat; there may be a sensation of impending death, and sometimes the patient loses consciousness. The attack may come on when the patient is at rest, but more frequently it occurs in consequence of exertion, emotion, excitement, or when

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the stomach is distended. The paroxysm may last for only a few seconds, or it may be two or three minutes, but after it does pass away a feeling of soreness and sensitiveness over the chest may persist for three or four days, and slight exertion or excitement induce short, mild attacks.

MacKenzie has called attention to the fact that areas of cutaneous hyperesthesia on the chest and arms are frequently discovered in patients who are the subjects of angina attacks, and ascribes them to the development of irritable foci in the cord as the result of frequent stimulation.

I have a patient who has suffered from this disease for nearly five years, and it is only by taking life very deliberately that he can avoid daily distress. During attacks the pain radiates to the inner side of the upper left arm, and even in the intervals this area is always more sensitive than that corresponding on the right side; but the most interesting feature is that occasionally this brachial pain exists in a mild form for several days, and the patient has noticed that the distress in the chest is more readily induced by exertion at such times, so that now he regards it as an epileptic would an "aura," and resorts to low diet and purgatives until the pain in the arm disappears. In this way the frequency of his attacks have very much diminished, and he can exercise more freely than formerly. It may be of interest to know that this gentleman has an aortic lesion, a few granular casts in his urine, and that his usual systolic pressure is between 170 and 180.

It is only natural that there should have been much discussion as to the cause of the symptoms in angina pectoris, because not only are the morbid anatomical changes inconstant, but the same changes are found in patients who never suffer from angina; and then the radiation of the pain from the chest to a more remote part, or the fact that the pain may originate in some remote part such as the wrist, remain limited to that area, or extend up the arm and to the chest, all tend to complicate the question. None of the explanations are above criticism, and it is possible that the same does not apply to every case.

The following are among the more important: Allbutt maintains that stretching of the root of the aorta is the cause of the pain, but this would not explain cases where the aorta is healthy, and also why the pain radiates only to the left arm; another belief is that the pain is associated either with disease or spasm of the coronary arteries, so that an ischemia of the myocardium is easily induced, the pain being the result of the anemia in the sensory nerve endings which are distributed along the walls of the blood vessels; another opinion is that spasm of the myocardium takes place like cramp in the muscles of the leg, and by severe pressure on the nerve endings makes them anemic and produces pain; again, that it is strain upon the left ventricle that irritates sensory cardiac nerves.

MacKenzie, on the other hand, believes that it is due to embarrassment of the contractility of the heart muscle, and that the pain is not felt in the heart, but in the chest wall, limbs, or other parts of the body that receive their nerve supply from

the segment of the cord containing the sensory centers that have been stimulated by an abnormal afferent impulse from the heart, arriving in the cord through the sympathetic, and on account of its increased intensity, or other abnormal quality, being diffused to adjacent nerve centers. MacKenzie's theory is based on the fact that the heart, like other viscera, such as the intestines, does not appear to be sensitive to ordinary painful stimuli, such as pricking, cutting, etc.

In the following way he explains how pain may result from morbid changes in the cardiac muscle, although that viscus is not sensitive to ordinary pain stimuli: "In the normal process of life a stream of energy from the viscera is continually passing by the afferent nerves to the spinal cord and continually playing upon the efferent nerves that run to muscles, blood vessels and so forth. These processes are conducted so that they give rise to no appreciable sensation. If, however, a *morbid process* in a viscus gives rise to an increased stimulation of the nerves passing from the viscus to the spinal cord, this stimulation affects neighboring centers. If it excites a sensory nerve the resulting sensation will be referred by the brain, not to the viscus, but to the peripheral distribution of the sensory nerve." ("Diseases of the Heart," p. 59.)

This constitutes a viscerosensory reflex, and a similar stimulation of motor nerves will cause muscular contraction or a visceromotor reflex. When, therefore, angina pectoris is due to diseased myocardium, the pain is felt not in the heart itself, but in the chest wall and arms, because the afferent nerves from the heart enter the cord at the same segment as the sensory nerves from the painful areas in the trunk and arms. MacKenzie therefore claims that all that is necessary for the production of an attack of angina pectoris is strain thrown upon the left ventricle greater than its muscle can easily and efficiently overcome, "whether a fairly strong muscle struggles against an increased resistance, or where a weak or degenerated muscle has opposed to its contraction a normal or even a lowered pressure, but a pressure greater than the weakened muscle can readily overcome. To this there is probably added an excessive susceptibility of the nervous system." (MacKenzie, "Diseases of the Heart," p. 72.)

The sensation of embarrassed contractility passes to the cord and there diffuses to adjacent sensory nerves, so that pain is experienced in their somatic distribution.

There has been some difficulty in accepting this view universally because in a very large proportion of cases the heart acts forcibly, and there is no indication of weakness or failure of contractility. We should remember that in atheroma of the coronary arteries, and other conditions that are liable to injure the heart muscle, the tissue changes are irregularly distributed throughout the myocardium both in regard to degree and extent, and consequently the embarrassment of contractility may take the form of incoordination of the contraction of the individual muscle fibres with or without weakness of the total force of ventricular systole. This

incoordination is more liable to be developed under strain, and by analogy we might expect it to give rise to pain such as is caused by irregular contractions of the intestines and uterus. Angina pectoris might therefore be described as an incoordination of contractility rather than an exhaustion of contractility, for it not infrequently happens that as the heart grows weaker the attacks diminish both in frequency and intensity.

The existence of vasomotor nerves on the coronary arteries is extremely doubtful, and consequently the value of the suggestion that the pain is due to spasm of these vessels suffers correspondingly.

While MacKenzie's theory has many physiological and clinical facts in its support, and explains some very difficult problems in relation to angina pain, it is not yet generally accepted, because there is evidence to warrant the belief that the nerve filaments on the vascular walls are capable of conveying painful sensation. The pain that is experienced when an artery is pinched in the forceps, the tenderness that is manifested when pressure is made over the aorta, carotids or peripheral vessels when they are the seat of inflammatory processes, all indicate that they are sensitive to ordinary painful stimuli, and therefore there is warrant for the belief that the pain of angina pectoris in some cases may originate in the aorta or arteries.

Those who believe that the heart has pain sensory nerves which may require some special stimulus, adopt the view that the splanchnic sensory nerves are less sensitive than the somatic sensory, that diffusion of afferent impulse from the former to the latter takes place, and, as the function of sensation is developed very highly in the skin, consciousness refers the sensation to the peripheral cutaneous distribution of nerve fibers entering the same spinal segment as do those fibers from that portion of the heart, aorta or coronary vessels that happens to be irritated.

The radiation of pain is also explained by the statement that blood vessels are demonstrated to be sensitive; there is no reason why the painful sensations should not be conveyed along the sympathetic fibers covering the blood vessels, and that the localized pain, such as is found in the wrist and other areas, may be the result of spasm of the arterioles producing local ischaemia and secondary nutritive changes in the muscles and nerves.

Recently, Verdun expressed the opinion that contraction of arterial muscle is the cause of the pain. He argues that the viscera are insensible to any ordinary form of painful stimulation, that spasmodic contraction of muscular fiber in the intestine and uterus is associated with severe pain, and while we are fully aware of many stimuli that induce muscular contraction, we are, on the other hand, absolutely ignorant of any agent that will produce pain without at the same time producing muscular contraction, and therefore suggests that the pain-producing stimulus is the product of the muscle spasm. He further adds: "The painful stimulus generated through the contraction of involuntary muscular fiber is a special stimulus *sui generis*, and as such must be the product of biochemical action."

His application of this theory to the pain of an-

gina pectoris is that in the heart or arterial walls or nerves regulating the contraction of these fibers there is some predisposing cause not always known, it may be degeneracy or it may be toxic, so that the muscle fiber responds by spasm to an ordinary contractile stimulus, or the nervous impulse may be excessive and produce spasm instead of the usual contraction, and as a result of this spasm a biochemical stimulus is produced which has the power of inducing pain in the region affected.

There are other theories, but they are all based more or less on the same lines as those described. None of them are beyond criticism, and the proper value of each can only be determined when our knowledge of physiology and pathological chemistry is much greater than it is at present.

Constriction.—This sensation is due either to inhibition of respiratory movement or to spasm of the intercostal muscles. MacKenzie believes that it is due to spasm of the intercostals, as a result of visceromotor reflex action from diffusion of visceral impulse to motor cells similar to that viscerosensory reflex. Not infrequently the sense of suffocation is without doubt due to an inhibition of respiratory movements on account of a dread that they may increase the pain, because the patient may sometimes be coaxed into taking a full inspiration and derives benefit from so doing; but this is by no means universal, as is evidenced by the fact that the feeling of constriction may be present when pain is absent.

Relation of attacks to meals.—It is a well-known fact that attacks of angina are more easily induced if the patient exercises soon after eating, or takes a hearty meal before going to sleep. MacKenzie suggests "that in some instances where angina pain is readily induced when the patient exercises soon after eating, the attack may be due to a digestive dilatation of the splanchnic area, together with a simultaneous dilatation of the somatic area as a result of exercise, so that the coronary arteries are imperfectly filled and the cardiac muscle exhausted under even moderate exercise." ("Diseases of the Heart," p. 99.) This theory may explain some cases, but it assumes the persistence of normal vasomotor reactions in pathological conditions of the cardio-vascular system.

During normal digestion there is a dilatation both of the systemic and splanchnic vessels, but especially of the latter, and this would lead to a natural fall in aortic pressure with diminution in blood flow to the different organs were it not "compensated by an increased output of blood from the heart. Observations show that after full meals there is a marked increase in the pulse pressure, indicating a more forcible beat of the heart. So far as the heart is concerned, the result of a meal is similar to that of muscular exercise." (Howell's "Physiology," p. 497.)

Such is the dictum of physiologists regarding the effect of food upon the heart's work; briefly stated, it says that the ingestion of food means increased heart's work, consequently exertion at such a time results in greater cardiac strain than when digestion has progressed to a more advanced stage.

In patients subject to angina pectoris the presence of arterio-sclerosis in some part of the body is the rule rather than the exception, and it must be remembered that after the aorta and coronary vessels the arteries of the splanchnic area are most liable to be involved in the degenerative process, also that the arterioles of sclerotic vessels are very prone to spasm. It is perfectly possible, therefore, that sclerosed vessels in the splanchnic area do not make a physiological response to the ingestion of food, but that some of them may dilate to a normal extent, others may be deficient in their expansion, while some of them may even be thrown into a state of spasmodic contraction, and yet the heart is stimulated by ingestion to increased exertion. Evidently, therefore, when an arterio-sclerotic man takes a hearty meal the strain upon his heart may be very much increased on account of pathological conditions in the splanchnic area, and if his coronary vessels are similarly affected it is not surprising that the myocardium should show itself unequal to the additional burden of exertion imposed upon it under such conditions.

The frequency with which attacks occur at night has always attracted attention, and various explanations have been offered; it is only to be expected that a seizure might follow the effort of undressing or the chilling of the body in a cold room, or the contact of cold sheets, but those that awake the patient from his sleep require some other explanation.

A short time ago I had a patient who experienced his first pain when he lay down to take a nap after lunch, and from that time on he suffered more or less pain every afternoon and night, until after five days he died in an attack that waked him from sleep about two o'clock in the morning. The bowels were thoroughly relieved by mercurials immediately after the first attack, he did not suffer at any time from indigestion, and twelve hours before his death he walked some blocks to the barber shop without suffering the least inconvenience.

Such cases can only partially be explained by the lowered state of the circulation during sleep and the diminished sensibility of the cerebral centers to afferent impulses that maintain the adjustment of the various automatic reflex processes going on in the body; because we cannot get away from the clinical fact that patients are more liable to attacks when in the horizontal position, and can often abort a seizure by sitting up. Probably interference with the amplitude of respiratory movement by pressure of the viscera against the diaphragm plays a very important part in the production of these attacks, and many chronic sufferers obtain relief by sitting up and taking five or six full inspirations at intervals of twenty or thirty seconds.

Full inspiration increases the negative pressure within the thorax, in consequence of which there is an increased flow of blood from all the veins opening into the right auricle, including the coronary sinus, and also a greater and more rapid flow of blood from the right to the left side of the heart since the capacity of the blood vessels in the lungs and the frequency of the heart beats

are both increased during full inspiration. The importance of this to an exhausted heart muscle is at once evident, because relief of the right auricle and coronary veins together with a greater amount of blood flowing into the aorta means an improved coronary circulation and a corresponding improvement in the nutrition of the myocardium.

The patient should not be allowed to take the full inspirations too often or too closely together, as he is liable to become exhausted, and my own experience is that unless some improvement takes place after six or seven full inspirations at intervals of twenty seconds, the treatment should be abandoned. On the other hand, it is extremely gratifying to see a patient begin to nod his head in sleep within ten minutes of the first long inspiration. It should also be remembered that he should be taught to inspire slowly and deeply, instead of making a short, violent, inspiratory tug that is liable to increase the spasm.

In cases of pronounced arterio-sclerosis the increased frequency of the heart beat may be of distinct value, because the tendency of diminished elasticity of the arteries is to interfere with the continuity of the flow, producing high pressure during systole, with a marked fall during diastole; but this is compensated to some extent by more rapid heart action, so that a more constant flow through the capillaries and veins is maintained. And this applies equally to the coronary vessels, because, although blood enters them during each cardiac systole, it is also true that "the volume of blood flowing through the heart vessels increases with the frequency or the force of the beat, since each systole empties the coronary system more or less completely toward the venous side, and at each diastole the distended aorta quickly fills the empty vessels." (Howell's "Physiology," p. 550.)

There is only one other topic to which reference will be made at this time, and that is the indiscriminate use of nitrites in the treatment of angina pectoris. It would almost appear that many believe the only treatment for this disease to be the use of such vaso-dilators as amylnitrite, sodium nitrite, nitroglycerine and theobromine sodium salicylate; and the story is often told that these remedies used to relieve the patient, but that now they have lost their effect; and it must be the invariable story if the treatment goes no further than the administration of such remedies.

From what has been said in the earlier part of this paper it is evident that the majority of cases of angina pectoris can be attributed to a disturbance of the relation between the peripheral resistance and the driving power of the heart; the disproportion is not always on the same side, at one time the resistance is abnormally high, at another the heart is weak, and again, both may be at fault; so that one of the first questions to be decided in regard to treatment is, Which is the greater sinner, heart or vessels? Or are both equally culpable?

The mere fact that nitroglycerine relieves the painful seizure does not prove that its prolonged administration is the appropriate treatment, because it may be that, although the resistance at times taxes the powers of that individual heart, an abnor-

mally high pressure is absolutely necessary for the perfect performance of the body functions.

The disappearance of pain does not always mean that the patient is better; it may be that the strain is relieved by a further myocardial failure resulting in mitral incompetence, so the angina disappears, but the patient's condition is actually worse. Whenever the relief of the pain is followed by the appearance or increase of dyspnoea, it is almost certain that this apparent cure is really an increased muscular failure; and it is perfectly possible that the use of the nitrites may have contributed to this condition in the following way:

In all probability the coronary arteries are not supplied with vasomotor nerves, but the flow through them is regulated by variations in aortic pressure. This is a most excellent provision, because the higher the aortic pressure, the more work has the heart to accomplish, and consequently a greater amount of nutrition is required by the cardiac muscle. If, on the other hand, the coronary arteries were supplied with vasomotor fibers, and participated in general vaso-constriction, then the heart muscle would be subjected to extra strain at the very time that its blood supply was diminished.

When the coronary arteries are sclerosed a higher aortic pressure is necessary to maintain the circulation through the heart, and it is not infrequent that the reduction of systemic pressure is followed by the appearance of disagreeable symptoms. I have a patient with marked arteriosclerosis who suffers from vertigo and dyspnoea on the slightest exertion, even talking, whenever the systolic pressure is reduced to 164, and who always feels at his best when it is between 170 and 180; also a lady of extremely active habits who is uncomfortable when the systolic pressure is brought below 210; and I have no doubt that everyone has had similar experiences.

The fact is that nitrites never will *cure* angina; they should be used for the relief of the pain, just as morphine is given to allay pain in other parts of the body. Frequently it is necessary to combine digitalis or caffeine with the nitrites or theobromine, so that an increased driving power together with diminished resistance may be obtained; and it is better still in conjunction with these to adopt the prolonged administration of alteratives such as iodides, arsenic, colchicum or mercury that without doubt improve the nutrition of the heart muscle.

The selection of these remedies, the dose of each, the duration of treatment, and the question of the simultaneous use of cardiac stimulants and vasodilators must all be left to the judgment of the medical attendant upon the individual case; he alone knows the etiology, he alone can estimate the disturbed balance between heart muscle and arterial resistance, and therefore the decision must lie with him.

Discussion.

Dr. H. D'Arcy Power: Two points in regard to angina pectoris I would like to make a remark about. The first is in relation to the frequency of angina after meals. Amongst a variety of theories it is necessary to use our own judgment in making a selection. For my own part, I cannot help

thinking that Dr. MacKenzie's theory answers in more cases than any other. In that case we are dealing largely with reflexes. We should look carefully to the splenic flexure of the colon. I have had personal experience of the importance of that viscus in relation to tachycardia. We frequently find angina pectoris and tachycardia in the same patient. In some of these patients it is dilatation of the splenic end of the colon that is the real cause of the reflex waves that give rise to these symptoms. I think that this can be demonstrated in many cases by careful massage and the displacement of gas from that area, with immediate relief. Anyone who has had experience with X-ray work in gastric disease will acknowledge that many cases, showing symptoms thought to be due to dilatation of the stomach, appeared on the plate as dilatations of the splenic flexure.

The second point is in connection with angina at night. We must look for some more general cause, a cause that will also account for the fact that from one to three in the morning is not only a frequent time for angina pectoris, but also for other diseases that are characterized by vascular spasm. It is a common time, for example, for epilepsy. If we are to look upon epilepsy as vascular spasm of certain regions in the brain, it comes into relation with angina pectoris. It is also a common time for the patient to wake up with asthma. In asthma you have a condition of muscle spasm. The same is true of migraine (possibly a localized edema secondary to vascular spasm and anemia) and of gout in the form of podagra. That brings up the question whether such attacks are not really due to toxic stimuli or the absorption of poisons, in some way dependent upon metabolic changes. We know that asthma, gout, epilepsy and angina pectoris are frequently associated in the same individual.

Dr. W. W. Kerr, closing discussion: There is not much discussion to close. We must not look for an explanation of all cases of angina pectoris in one particular cause. Even the pain to which Dr. Power referred after food cannot always be put down to this disturbance in the colon, because it will come on very frequently long before the food has entered the colon. You will find it very frequently after breakfast. If they take a very light breakfast and sit still for half an hour, they can then walk with much more ease than if they started right from the breakfast table to take a walk then. There is no doubt that cases of asthma and others are due to trouble in the colon, and you can have this form of peptic angina just in the same way as we have peptic asthma. That is why I rather think of angina pectoris only as a symptom instead of a disease. It is very unfortunate to regard it in any other way, because I think it clouds the interpretation of symptoms.

One other point is in regard to the prognosis. Unfortunately, an unfavorable prognosis is given in many of those cases of angina pectoris where the pain comes upon moderate exertion or very soon after food. You will find that is very common indeed in men from fifty-three or four years up to sixty. You will also find if you inquire about those patients, that a great number of them have been people of pretty full habits and at the same time people who have not changed their mode of living as the years came upon them. Possibly they have increased, instead of diminished, the amount of food they take. Without doubt, after forty we should gradually diminish the amount of food we take, whereas I think the usual custom is to be less inclined to take exercise, perhaps being better fixed financially, and their diet as a social habit is more and more increased as they get along in years. It is at that time you will get those attacks developed. Over and over again I have had patients put upon restricted diet and taught how to eat; some little correction given, perhaps a little nitroglycerin at

the time, just for the relief of the spasm, also the use of various aids to digestion; and those patients will make a perfect recovery and live a very comfortable life. On the other hand, if told that it is angina pectoris, they diagnose the disease as hopeless and practically nothing is done. I think the prognosis of those cases should always be kept clearly in mind, because the prognosis certainly is good.

DERMATITIS CAUSED BY PRIMULA POISONING.*

By DOUGLASS W. MONTGOMERY, M. D., and
GEORGE D. CULVER, M. D.

Primula poisoning is probably not frequent, but curiously enough in the past few months we have run across quite a number of instances. Its previous infrequency may have been either due to absolute infrequency or to oversight on our part. In medicine one usually finds only what one looks for, and in primula poisoning, as we shall see later, the cause must frequently be persistently searched out or it will not be found. The following case illustrates the intensity the disease may assume, and its elusive etiology:

A woman, forty-four years of age, consulted us August 26, 1913, on account of a blotchy, intensely itchy erythema of the face, and a papulo-erythematous eruption of the flexor surface of the forearms, that had begun five months previously. Inquiry was made in regard to both rhus and primula poisoning, but the possibility of either was denied. The long, steady endurance of the eruption would exclude rhus poisoning, as the exposures to poison oak, in contradistinction to primula exposures, are interrupted.

These external causes of dermatitis being excluded, internal incitants to vaso-motor disturbance were sought for, and enough was found to account for the trouble. She had symptoms of slight icterus with a somewhat enlarged liver, and an immensely dilated colon, with tenderness in the left inguinal region. The urine contained indican, and showed also a greenish yellow line with the cold H N O₂ test, that we assumed to be due to bile. She was taking about a quart of buttermilk a day, which represented a decided intake of cheese, and she was eating a considerable quantity of fruit, the fructose of which is often very irritating to the skin.

She frequently had to take a soporific to induce sleep, and she had pains across the lower part of the abdomen, which she said she had often noticed preceded the outbreak of an eruption.

The most various things seemed to give rise to the eruption, as, for instance, a drop in the atmospheric pressure preceding a rain storm, or sitting up late at night to play cards, or the mental irritation caused by a wearisome relative. On January 23, 1914, an earthquake seemed to bring out two red spots, one on each cheek. Everything indicated the existence of an exceedingly labile vasomotor system, giving rise to an erythematous eruption, especially of the face and upper extremities, situations in which such vasomotor eruptions tend to appear.

The first effect of our treatment also confirmed us in our view that we were correct in considering the disease a vaso-motor neurosis, as we were apparently strikingly successful, and were congratulated on our good fortune by a physician who previously had treated the patient.

During the summer she went to the country where she became perfectly well, through bad weather, card parties, and all other causes that seemed to be so deleterious while living in the city. Her husband wrote to us that he especially

tried her out in these directions. Finally, she arrived home on the morning of July 28, and by the evening she was well on her way for another bad attack. She fled to the country again, and recovered speedily and completely. Immediately on hearing of this we wrote to the husband to get an expert gardener, and to search the house and grounds for primroses. They were easily found; they were around a fountain, and were the picture of innocence and loveliness. The patient did not know primroses by their name. The gardener subsequently admitted that he knew primroses caused trouble on the skin. Naturally, however, he was more interested in selling them, than in telling of their disagreeable effects.

On thinking back, the vagaries of the eruption were accounted for. For instance, the patient had helped her husband during the rush of the Christmas trade, and as a consequence was not so much at home, and had a marked respite, that we all ascribed to the treatment.

The erythema in this case was an intense dusky redness, especially marked across the middle zone of the face, with puffiness of the lower lids. The redness had the peculiar bronze tint seen in chrysarobin dermatitis, and gave the patient an Indian-like complexion, and after its subsidence a brown pigmentation remained. Once the eruption appeared as an itchy erythema of the privates. An attack was often accompanied by the appearance of vesicles and blebs. The itchiness and burning were so severe as often to require strong sedatives, both internally and topically.

In investigating the etiology of such an affection the physician necessarily must leave much to the patient. For instance, in this case, we remember distinctly that we early asked about the possibility of primroses as a cause, and being assured on this point, the idea of the affection arising from internal disturbances was taken up. In another case that one of us saw with a friend, the same lapse occurred; the inquiry regarding primroses was made, with a negative response, and it was only after an absence from home with recovery, and a return home with a relapse, that a more thorough search revealed the cause.

Very shortly ago we were consulted by a young man with a light red, mottled erythema of the face and hands, and an urticarial eruption of the body. An inquiry about primroses elicited a negative response. At the next visit a more persistent questioning induced the patient to look into his garden more closely. He found the criminals; they had escaped observation because of not being in bloom, and because the leaves are low and inconspicuous. In this case the eruption was most marked on the left side of the face, the side on which he wore his button-hole flower.

It is quite characteristic of the affection that it should disappear on the patient leaving home, to reappear on returning. Foerster had a patient that got an attack on Easter Sunday afternoon for three successive years. Each time the "gouty eczema" was cured after a stay at a German health resort.¹

The face, hands and arms, according to Foerster, are the almost exclusive situations of the dermatitis. We have seen it involve the trunk as an urticarial-like eruption, and, like poison oak, it may appear on the privates, although this is rare. As Foerster

* Read before the San Francisco County Medical Society, November 10, 1914.

has remarked it may show itself only as "an intensely itching or burning sensation confined to the finger pulps, which become puffed, tense and slightly reddened."

H. A. Sharpe has drawn attention to the occurrence of this form of eczema in the country from the wild primrose.² He thinks that it often occurs from handling the udders of cows that have walked among the dew-laden flowers.

In making a diagnosis it is often a pitting of our wits against the traps laid for us by Nature, and frequently it is Nature that wins out, and she may do so when we feel most confident, as for instance, for a long time in the first case here recited. Conditions in the alimentary canal are so often the key to eruptions on the skin and mucous membranes, that they constitute a temptation not to look for topical causes. When, however, in such a case the cause happens to be found by an outsider what a deal of opprobrium and ridicule the physician is subjected to! And we freely admit that in this case it was not an intellectually worked out diagnosis, but a chance thought that finally solved the problem.

PRIMROSE—*Primula Sinensis*.

One of the finest spring blooming pot plants. Easy to grow, pretty in leaf, handsome in flower, and continuously in bloom for months at a time. These merits alone would earn a place in every window; but when we add that it is one of the plants never attacked by insects and that it will bloom in a sunless window—where a *Geranium* or *Heliotrope* would never show a bud—it is clear that the smallest collection would never be complete without it. Our seed is saved from the choicest strains and can be relied upon to produce the largest flowers and finest colors.—Mixed—Large packet 25c. Plant from February to May.

The advertised description of the plant is included because it shows so well the attitude of the florist. This desire on the part of the flower dealer to sell the plant together with the beauty of the flower and its good blooming qualities that appeal so strongly to women and induce them to buy, will, we have no doubt, successfully prevent the elimination of this interesting dermatitis.

It is also interesting to note that the plant is seldom attacked by insects. Probably the same poison that causes the dermatitis in human beings also acts poisonously on insects, and so constitutes a defense for the life of the plant.

Discussion.

Dr. Emmet Rixford: It seems too bad to relegate such a pretty flower as the primrose to oblivion just because it occasionally causes an annoying dermatitis. I suppose it is true that cases of primrose dermatitis are more frequent now than formerly since the primrose, especially the Chinese variety, has been so much more commonly used as a house plant. However, there must be great differences in the susceptibility of individuals to the poisoning. In my house we have had a number of such plants but have had no trouble with dermatitis. The first case of the kind I saw I thought was poison oak because of the similarity of the eruptions.

Dr. Montgomery, closing discussion: There are many kinds of primroses; the most obnoxious ones to the skin, however, I understand to be the *Primula obconica* and the *Primula sinensis*.

There is a point that Dr. Rixford has just drawn my attention to, and that is the varying sensitive-

ness of people to this poison. This unusual cutaneous sensitiveness seems often to be dependent upon noxious fermentations in the alimentary canal. That it may exist without any autointoxication whatever seems also to be probable.

¹ *Primula Dermatitis* by O. H. Foerster, Jour. American Medical Assoc., Aug. 20, 1910.

² *Primula Dermatitis*. Its Occurrence in Rural Districts. Jour. A. M. A., Dec. 14, 1912.

THE EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS.*

By ROBERT A. PEERS, M.D., Colfax.

The title "The Early Diagnosis of Pulmonary Tuberculosis" should probably read "The Earlier Diagnosis of Pulmonary Tuberculosis" because, whether we believe that tuberculosis is essentially an infection of childhood with the later or secondary manifestations in adult life, or whether we believe that most infections take place later in life than childhood, we must all admit that the tubercle bacillus has been implanted and has been nourished and propagated within the human body for months, at least, and in some cases for years before the symptoms develop sufficiently to call for treatment or to bring the patient to the physician. Thus it seems rather out of place to speak of early diagnosis when the disease has existed for many months.

We do know, however, that many patients arrive at the doctor's office at a relatively early period of the disease and while there is yet time, if the cause of the illness is recognized, to prevent its spread and to secure an arrest of the process. We do know, also, that many of such cases go unrecognized and that they are treated often as malaria, chronic bronchitis, asthma, anemia, indigestion, or one of many other disorders. It is my desire to attempt to outline the means by which an *earlier diagnosis* can be reached.

In the first place then it is necessary for the physician to have in mind that tuberculosis is the most common disease with which we have to deal—one that infects perhaps 90% of our clients at one time or another and which causes the death of one out of every six persons in this state. It is absolutely necessary that these facts be appreciated in order that the physician may think of tuberculosis whenever making a diagnosis, for only in this way will tuberculosis be discovered early as a rule rather than as an exception. The patient is febrile—think of tuberculosis as one of the febrile diseases at the same time that you consider typhoid, malaria, and the like. The patient is run down, tired and nervous—think of tuberculosis as well as anemia, malaria, overwork or other similar causes. The patient clears his throat and raises in the morning—think of tuberculosis as well as catarrhal conditions of the naso-pharynx, pharynx, larynx, and other parts of the upper respiratory tract. In fact think of tuberculosis as a possible cause of any febrile condition, any depreciation in weight, strength, or working force, any cough or clearing of the throat, and eliminate tuberculosis or discover it as the cause of the symptoms.

Commencing then with the due appreciation of

* Read before the Sacramento Society for Medical Improvement, June 15, 1915.

the morbidity and mortality of tuberculosis, the most valuable aids in making an earlier diagnosis are: first, plenty of time for examination; second, a capacity for taking pains; third, a knowledge of the methods necessary to elicit physical signs; fourth, the ability to properly interpret the meaning of physical signs and symptoms.

Of these aids I unreservedly name the first—viz.: plenty of time for examination—as the most important because without plenty of time for examination one cannot expect to diagnose tuberculosis in the relatively early stages. At Colfax we allow from an hour to an hour and a half for an examination and not infrequently from two to three hours are expended on a patient before a diagnosis is reached. First comes the taking of the history including the recording of personal matters as social condition, sex, age, nationality, and occupation; then the family history, going carefully into the health of every living member of the family and as carefully into the cause of death of those who have died. Especial attention should be paid to questioning regarding cases of asthma, chronic bronchitis, chronic pneumonia, gastric disorders, as to whether the living members are thin or well-nourished, and many other points which experience will prove to be of value. The past history will furnish information, in addition to that pertaining to diseases which are well defined, as to atypical fevers, coughs which have hung on, run down spells accompanied by coughs and night sweats, the occurrence of pleurisy, with or without effusion, the persistence of clearing of the throat, variations in weight, including the average, maximum, and minimum weights since adult life has been reached. The history of the present illness will include generally the history of the past several months. The most common first symptom is a tired feeling usually coming on in the afternoon. Patients describe this variously as a "tired feeling," "a lazy feeling," or "a lack of ambition," and in many other ways. This tired feeling may precede, accompany, or follow a loss of weight or may be entirely independent of any change in weight. It usually precedes the occurrence of a frank cough by several weeks or months but is usually secondary, in point of time, to a clearing of the throat. This clearing of the throat, especially in the morning, has been an early symptom in hundreds of our cases. The other symptoms of cough, rapid pulse, loss of weight, afternoon temperature, pains in the chest are so well known that they may be passed without comment. It is not the presence of any one or all of these symptoms that makes for diagnosis, but a combination, because we cannot make an early diagnosis from the presence of symptoms but must judge our case by a consideration of the history, the symptoms present and the physical, laboratory, and biologic findings.

The physical examination should include the pulse rate, temperature, weight as compared with the height and also compared with the previous weight and the normal weight, the appearance of the skin and complexion, the size and contour of pupil and the reaction, the size of the thyroid,

presence or absence of enlarged glands, the fingers: to see if clubbed, the nails to see if curved or straight, the general appearance to see if toxic or dyspneic, and the chest examination. The pulse rate may be accelerated or may be normal in number of beats although usually the pulse is relatively rapid even in early cases. The blood pressure is usually low; in fact, in our cases of tuberculosis with a normal or increased pressure a urinalysis is at once called for. The temperature may be sub-normal, normal, or slightly elevated. In order to learn anything from the temperature one should take several readings a day for a number of consecutive days. One temperature reading is more apt to mislead than to be of value. The weight is important but a patient may have advanced tuberculosis and be above normal weight. The early tuberculous patient is more apt to be well nourished than thin and this must not be forgotten in making the diagnosis. The skin will perhaps be pale but may be ruddy and of good color. The condition of the thyroid may explain a rapid pulse and slight fever and this gland should always be examined. Enlarged cervical glands are found in nearly every case of tuberculosis we see but as we see practically none but the tuberculous we cannot speak regarding their presence in the non-tuberculous. Clubbed fingers and curved nails are to be found usually in late cases. Patients markedly dyspneic and toxic usually do not belong to the early cases—although sometimes in early acute cases these symptoms are found.

The examination of the chest is important and plenty of time should be allowed in order that it may be thorough. Every patient, male and female, should be stripped to the waist and have the lower clothing loose at the waist. This is very important but is frequently not insisted upon. The patient should be placed in a good light and may be seated or standing. I prefer to have my patients seated. It is easier for me to examine them when in this position and is less tiring. A tired examiner does not do his best work.

The appearance of the chest is noted and in early cases may look normal. The expansion is also noted as to degree and also one side in relation to the other. Where the involvement is not great the expansion may appear normal but frequently there is a lagging behind or a deficient expansion of one or both lungs or of a part of one lung. Percussion very frequently reveals dullness at one or other apex and it is always advisable to percuss along the anterior border of each trapezius muscle because it is here earlier than elsewhere that one elicits a restriction of the resonant area. A restricted apical area of resonance means usually that there is infiltration or contraction from scar tissue. Tuberculosis is the most common cause of either of these conditions. This outlining of the apical area of resonance is, in my mind, of considerable importance and should never be neglected. A careful observance of this rule will soon convince any examiner that he must not look so much for a dulling of the whole apex as for a restriction or limitation of the resonant area. After the percussion and outlining of the apices it is well to

percuss the entire chest from below upward and note differences of pitch. Also it is well to make percussion before inspection of the respiratory excursion because deep breathing influences quite considerably, at times, the limits of resonance and dullness.

Regarding auscultation I will state that it is of extreme importance and should be thoroughly carried out. One should have a quiet room, a good stethoscope, and a knowledge of the best method of eliciting physical signs. The signs found in relatively early cases are higher pitched breathing, a lengthening of the expiratory murmur, roughened breathing, and rales. The first two are heard best during quiet or slightly lengthened breathing. The latter (rales) may be heard in quiet breathing but, in that case, the lesion is usually not an early one. It is often necessary to have the patient cough and then breathe deeply or, after deep expiration, cough and take a deep breath. Most of the physical signs which are overlooked have been lost because the examiner did not know how to elicit them rather than because he failed to recognize them when heard. Rales that are permanent (i. e., persist after coughing) are more probably due to tuberculosis than those which are transitory or disappear on coughing. Rales found at the apex are, as a rule, but not of necessity, more probably due to tuberculosis than if found only at the base. Rales in asymmetrical areas are of more importance than if found over a corresponding area of each lung. It is to be remembered though, and emphasized, that rales found in large numbers indicate that the infection is not an early one.

The fluoroscope and the X-ray plate are valuable aids in diagnosis but do not distinguish between healed and active lesions. With the fluoroscope one can frequently observe in addition to the shadows due to disease the lack of chest expansion and the failure of the diaphragm to properly rise and fall. The X-ray plate is more valuable in doubtful cases because it can be studied for a longer period of time and furnishes a permanent record.

An examination of the sputum should always be made and, if negative, repeated one or more times. The best specimen is the one obtained the first thing in the morning when the patient "clears out the chest." The patient should be instructed that the specimen should come from "deep down" and not from the throat. Frequently the tubercle bacilli will be found if the sputum is obtained during the occurrence of an exacerbation when they are absent at other times. There are times also when the patient expectorates what is described as a peculiar, sweetish tasting sputum. This almost always contains tubercle bacilli. Much's granules may be looked for if tubercle bacilli are not discovered by the ordinary means of examination. It must be borne in mind, however, if we are going to make early diagnosis of our tuberculous cases that we must consider the findings at sputum examination as of secondary importance when they are opposed to the history, symptom complex, and physical signs. Much has been written about the significance of the presence of albumin in the sputum as

a sign of tuberculosis. Many believe that its presence is indicative of pulmonary tuberculosis while other, equally competent, observers believe otherwise. Our experience has been with purely tuberculous cases and we have not had sputa from non-tuberculous patients so that we could make personal observations of value on this point.

Tuberculin tests are of value in the presence of signs pointing to active disease, such as cough, expectoration, loss of weight, night sweats, fever, etc., but should not be considered aside from other symptoms. The test which is really the most reliable is the subcutaneous test which produces a systemic and, at times, a focal reaction. There are so many unpleasant features about this method that it is not generally used but has been abandoned in favor of certain cutaneous and percutaneous methods. The scope of this paper will not allow an extended treatise on the subject of tuberculin tests and I shall merely state: First, we personally use the intradermal method. Second, we make up our dilutions fresh for each test. We do not use a tuberculin dilution more than forty-eight hours' old because we believe many failures to obtain a reaction are due to the use of inert tuberculin. Third, tuberculin tests are merely confirmatory and not absolute. That is, we do not accept the verdict of the tuberculin test to the exclusion of all other methods of examination. Rather, like the sputum examination, it is secondary. This does not mean that we reject the evidence furnished by a positive tuberculin test as pathognomonic of infection by the tubercle bacillus. We believe most positively that the occurrence of a positive reaction to tuberculin means that the patient has at one time had tuberculosis with the formation of tubercles. What I wish to convey is we do not believe that a positive reaction necessarily indicates the presence of active tuberculosis requiring therapeutic measures.

In passing, I might add, bearing upon this point of when it is necessary to apply therapeutic measures and when it is not necessary, that much laboratory work is being done in an effort to develop a complement fixation test analogous to the Wassermann test in lues whereby it will be possible to determine those patients with early tuberculous lesions requiring medical supervision and treatment. If these efforts are successful a great advance will have been made in the attempt to control this disease.

In conclusion, I would lay stress upon the following points which I have endeavored to make:

1. We should bear in mind that most persons with whom we come in contact have at one time been infected by the tubercle bacillus and we should have tuberculosis in mind when making a diagnosis in every obscure medical case.

2. Examination must never be hurried but must be slow and methodical.

3. The patient should be examined with the chest fully exposed.

4. The chest should be carefully examined by all means at our disposal; inspection, percussion, auscultation, and by means of the Roentgen ray. In

auscultation, coughing before inspiration is a valuable aid in eliciting rales.

5. A single negative sputum examination is not conclusive. Several negative sputum examinations should not outweigh results obtained by other methods.

6. A positive tuberculin test means that tubercle formation has been present in the person reacting to the test but does not necessarily indicate the need of treatment.

7. A diagnosis in early tuberculosis must be made only after a careful weighing of the patient's history, his symptoms, his physical signs, the examination of his sputum, and his reaction to tuberculin. It is here that judgment and experience find their highest expression.

THE OCCURRENCE OF HEART BLOCK IN ACUTE DISEASES.*

By HERBERT W. ALLEN, M. D., San Francisco.

In the last ten years the number of reported cases of heart block has reached very considerable proportions, due largely to the interest taken in the subject following the successful experimental production of the condition, and to the more general use of graphic methods in the study of cardiac diseases. The great majority of the reported cases are instances of the chronic variety, as usually met with in adult life. That heart block may occur as a transient or even permanent feature of acute disease at any age is not, I think, very generally understood, nor is the importance of its recognition fully appreciated. One finds here and there casual reference to the fact of its occurrence, and some of the special works on heart disease make particular mention of it, but in looking over the literature on cardiac disease for the past seven years I could find only three articles dealing more or less directly with the subject, aside from individual case reports. Peabody in 1910 reports a case and reviews the literature to that date. Cowan in 1912 gives his experience, embracing a number of cases; and Lewis in 1913 in a lecture emphasizes particularly the importance of the recognition of this condition. Mackenzie in his numerous writings occasionally makes mention of it.

Before giving my results of a review of the literature, it may be well to define just what is meant by heart block. Lewis defines it as an abnormal heart mechanism in which there is a delay in, or absence of, response of the ventricle to auricular impulses, and this conception of the condition is the usually accepted one. Normally the ventricle contracts in response to an impulse received from the auricle, the stimulus traveling from the upper to lower chamber along the neuromuscular tract known as the auriculoventricular bundle. The time for the passage of this impulse varies within fairly narrow limits, 0.12 to 0.18 of a second, and does not in health exceed 0.2 of a second. The mildest grades of heart block consist in a mere prolongation of this conduction time; more severe grades in the occasional failure of the ventricle to respond to the auricle;

then the ventricle may contract only after every second, third or fourth auricular contraction; finally, complete dissociation occurs and each chamber beats independently and at its own intrinsic rate. The milder grades of heart block cannot be recognized without the aid of graphic methods; complete block, owing to the slow ventricular rate usually present, does not necessarily require tracings for its detection.

In order to obtain some idea of the frequency of occurrence of heart block in acute diseases, I have examined all the references available to me and have found mention of sixty-one cases. That number does not, I think, give a fair idea of the frequency of the condition, partly owing to the transient nature of many cases and partly to the failure of many physicians to attempt to differentiate the several kinds of cardiac arrhythmia. In the interests of prognosis and of treatment, such a differentiation is however decidedly important. Peabody, in his article published in 1910, found only eleven cases in the literature where there was good proof of the presence of heart block in association with acute infection; evidently the cases are now being recognized more frequently.

These sixty-one cases have occurred as manifestations of a variety of acute conditions. As might have been expected the rheumatic group of infections includes by far the largest number of cases; eighteen in association with acute articular rheumatism, two with pericarditis and one with tonsillitis. In possibly five of these the block was thought to be complete; all of the others were instances of partial block and of transient duration.

Diphtheria comes next on the list, accounting for nine cases. Five of these were fatal, though just how much influence the heart block had on the fatal outcome is problematical. That block is of infrequent occurrence in diphtheria is indicated by two recent studies of the heart in this disease. Gunson investigated 120 cases, making numerous polygraphic studies. He does not report any instance of block. Hume and Clegg, in a study of 573 cases, found one with block. Three were thought to have auricular fibrillation and heart block, but in the absence of electrocardiographic study there is naturally some doubt of this.

Acute endocarditis accounts for four cases, all of which were fatal. In two the block was complete; in two incomplete. Two cases of chronic valvular disease with transient reinfection showed partial block during this stage. It is strange that not more instances of this character are reported, for several writers, particularly Lewis and Mackenzie, have called attention to the frequency of its occurrence.

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Complete block developed in one instance during a six months' illness from tuberculous peritonitis. No other etiological factor could be found and it was known that for two years previous to the illness the pulse had been of normal frequency.

One case is attributed to acute gout and one to an illness which was called gastro-enteritis. Complete block developed after severe hemorrhage in one patient. This was of only a couple of days' duration; subsequently the conduction time was normal.

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A certain objection can be urged against the acceptance of all of these reported cases as instances of heart block, for in some where tracings are said to have been made they are not published, while in quite a number no graphic records were obtained, the diagnosis resting on the occurrence of marked bradycardia with frequent visible jugular pulsations and sometimes syncopal or epileptiform attacks. However, with the great majority there is but little doubt of the correctness of the diagnosis.

In analyzing these cases several facts of interest are brought out. In general the condition was a decidedly mild one; in some the block was complete and permanent; in the majority it was incomplete and transient. It may be noted only during a single day of the illness or over a considerable period and well into convalescence. In a great many instances it is unattended by any subjective manifestations, but in quite a number definite symptoms of Adams-Stokes syndrome occurred: giddiness, transient loss of consciousness or epileptiform convulsions. As for the age incidence, the condition may occur at any age but in contradistinction to chronic heart block, which is more commonly seen in elderly people, the acute cases are more frequently met with in the young. A number were in children under ten years; the youngest in a child of three. One striking feature is the completeness with which all trace of the block may disappear. For example, Gosse reports the case of a boy of twelve who had mitral and

aortic insufficiency and who had previously suffered from pericarditis and rheumatism. He ran an irregular fever for four weeks, for a time there was only a prolongation of the a-c interval; later partial block developed and persisted for eighteen days; this then disappeared and finally the a-c interval returned to normal. The condition was verified by polygraphic and electrocardiographic records. There are a number of such examples in the rheumatic group of cases.

Among the sixty-one cases death is definitely stated to have occurred in twelve; in some the outcome is not mentioned. Four of these were cases of acute endocarditis which is so often fatal; five were instances of diphtheria in which the death rate is also fairly high. In several cases careful examination of the heart has been made, including serial sections of the auriculoventricular node and bundle, and we are in consequence in possession of data throwing some light on the nature of the process that is directly responsible for the heart block. One of the most carefully studied cases is reported by Butterfield. A girl of sixteen was ill for seven weeks with acute endo and pericarditis. Partial block developed eleven days before death. Microscopical examination of the heart showed perivascular inflammatory lesions in the myocardium, diffusely scattered but conspicuous in the region of the central fibrous body where they had invaded the auriculoventricular bundle. Fleming and Kennedy made a careful microscopical study of the heart of a girl of ten who died on the tenth day of a diphtheria and who developed a complete block before death. There was found an interstitial myocarditis; infiltration with inflammatory cells, mostly lymphocytes, as well as focal collections of these cells. Similar changes occurred in the auriculoventricular node and the first part of the bundle.

One of Gerhardt's cases is of interest in that the acute heart block was recovered from and the patient died later of another cause. A man of twenty-five was sick for several months with angina and rheumatism complicated with pericarditis and pleuritis. Early in the disease his heart was irregular and tracings showed a varying grade of block, probably at one time complete. There were several attacks of anxiety and loss of consciousness during which his pulse became very slow. Recovery finally ensued. When about ready to leave the hospital the patient contracted typhoid fever and died in the fifth week from hemorrhage. Examination of the auriculoventricular bundle by means of serial sections showed areas of decided cellular infiltration, particularly marked in the neighborhood of the vessels. Also there was a marked change in the vessels themselves: decided thickening of the intima so that in many of the larger vessels the lumen was decidedly narrowed, slight changes in the media and some cellular infiltration in the adventitia.

We have positive evidence then that in many cases at least of acute heart block we are dealing with a condition dependent on an organic basis. Whether or not all cases can be thus explained is not yet definitely settled. Lewis, whose opinion

auscultation, coughing before inspiration is a valuable aid in eliciting rales.

5. A single negative sputum examination is not conclusive. Several negative sputum examinations should not outweigh results obtained by other methods.

6. A positive tuberculin test means that tubercle formation has been present in the person reacting to the test but does not necessarily indicate the need of treatment.

7. A diagnosis in early tuberculosis must be made only after a careful weighing of the patient's history, his symptoms, his physical signs, the examination of his sputum, and his reaction to tuberculin. It is here that judgment and experience find their highest expression.

THE OCCURRENCE OF HEART BLOCK IN ACUTE DISEASES.*

By HERBERT W. ALLEN, M. D., San Francisco.

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carries great weight, feels that they can. Others differ with him and would explain some of the cases as due to increased vagus tone. In support of this contention is the occasional relief of the block by the use of atropin and also the well known fact that vagal stimulation is capable under some conditions of causing heart block. Probably though this does not occur unless the auriculoventricular node and bundle are already damaged by disease. The weight of evidence is certainly in favor of an organic basis for all cases.

The real importance of the recognition of these cases of acute heart block lies in the fact that through them we have definite evidence of the involvement of the myocardium in the disease process and in many instances this is the only evidence that the infection has spread beyond its original confines and has invaded the heart. The involvement of the auriculoventricular node and bundle is of course only part of the general myocardial invasion; through knowledge of its specialized function we are able to recognize disturbances in it.

In place of involvement of the auriculoventricular node or bundle we may have damage to one or other branch of the bundle. This alone does not cause any irregularity of the pulse and without the aid of the electrocardiograph cannot be detected. The only physical sign that may accompany it is a decided reduplication of the first heart sound. Disease of one bundle branch is usually a chronic process but it may occur as a manifestation of acute infection, and when it can be recognized it has the same significance as true block.

In conclusion one may say that heart block occurs not infrequently as a manifestation of acute infectious disease. Probably a good many cases are unrecognized because of their very mild and transient nature. In many cases the disturbance has been proven to depend on definite organic changes; probably the majority if not all cases are to be explained on a similar basis. Partial heart block may be the sole manifestation of involvement of the heart in the acute infection.

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PITFALLS IN THE DIAGNOSIS OF RENAL LITHIASIS.*

By MARTIN KROTOSZYNER, M. D., San Francisco.

In spite of the great strides made in the correct preoperative recognition of surgical renal lesions, and in spite of the many exact methods of examination by which renal surgery of late has advanced to an almost marvelous degree, the diagnosis of surgical kidney lesions is, nevertheless, in many instances very difficult and, not rarely, entirely impossible. The application of the majority or even of all of the many exact methods of examination at our disposal to-day does not always give reliable results of truly pathognostic value. The hidden position of the kidney renders palpation difficult and may, on account of the manifold relations of the kidney to important neighboring organs, render it a procedure of doubtful and misleading diagnostic character. Chemical urinalysis, so valuable in internal medicine, is of no material aid in the majority of surgical renal lesions. Cystoscopy and radiography will at times fail to give exact data, and especially the latter method may occasionally lead to erroneous conclusions; determination of renal function, moreover, by many renal surgeons heralded as unimpeachable evidence in renal diagnosis, is almost valueless in the absence of a marked relative functional discrepancy, and even the most modern diagnostic method, pyelography may, in many instances, fail to furnish a clew to the correct diagnosis.

These remarks are not written in a pessimistic attitude of mind, inclining towards minimizing the value and efficacy of our modern armamentarium in renal diagnosis; for the old adage, "*qui bene diagnosticitur, bene curabit*," is nowhere in the realm of medical science more appropriately applicable than to renal surgery. The many noteworthy observations on clinical renal lesions, which are recorded in the literature since the first kidney was removed by Gustav Simon, have obtained their real and intrinsic scientific value on the basis of a thorough knowledge of modern diagnostic methods, and the preoperative diagnosis of renal lesions, therefore, stands to-day on a much firmer scientific basis than formerly. Thus it occurs that the diagnostic exposure of the kidney, which up to a short time ago was practiced by many surgeons as a procedure of choice, is to-day a method of last resort which is considered permissible in exceptional cases only.

The diagnosis of nephrolithiasis seems at present a simple procedure on the basis of the evidence furnished by radiography and is undoubtedly easily

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accomplished, in many instances, by the general practitioner. There is, nevertheless, no other pathological condition in renal surgery so liable to offer diagnostic pitfalls as renal lithiasis. A few facts should therefore be borne in mind by the surgeon in order to avoid grave diagnostic errors:

1. A kidney may for a long period of time contain one or more stones of large size, occupying a position in the renal pelvis extending into the calyces, without causing any subjective and only such slight objective symptoms that the existence of nephrolithiasis is either entirely overlooked or not suspected.

A large pyonephrotic stone kidney was removed from a man of 52, who had been treated at various hands for stone in the bladder. All his symptoms had pointed to the bladder, in which the cystoscope revealed two small concretions. On account of the microscopic findings of numerous pus-cells, an infection of the upper urinary tract had been suspected, which was traced to the right kidney, and radiography demonstrated several characteristic calculi-shadows in the region of the right kidney.

2. In the presence of one or more calculi in the kidney, pain may exist in the opposite organ. This phenomenon is elicited by the reno-renal reflex exerted from the diseased to the healthy organ.

A remarkable specimen of a left-sided pyonephrotic stone-kidney, which originally contained so many calculi that they could not be replaced into the opened kidney, was removed from a man of 45, who came under observation with vague symptoms of a moderate pyuria and occasional painful sensations of indefinite character in the back and right-kidney region.

3. Pain may be of such vague nature and location as not to suggest its being in any way connected with the diseased organ.

A large pyonephrotic stone-kidney was removed from a woman of 55, who had complained of various neurasthenic paresthesias, including vague pains in the back, which for many years had been treated as lumbago. No subjective or objective symptom pointing to a lesion of the urinary tract had existed except a moderate pyuria. A careful urological investigation including radiography demonstrated at once the correct diagnosis.

4. Pain due to nephrolithiasis may be so referred by the patient that a disease of another organ is diagnosed.

A woman of 30 with severe pyuria and typical attacks of right-sided colic, showed radiographically two small well-defined shadows on the right side of the spinal column at the point of an ureteral impediment on that side, and apparently in the course of the ureter, as ascertained by a shadow-casting ureter catheter. At the operation the ureter was found to be imbedded in dense adhesions, particularly at the point of its crossing with the ext. iliac; in the attempt to free the channel from adhesions, the peritoneal cavity was opened, and a long and tortuous appendix was found to be a part of the dense adhesions to the ureter. In the center of the opened appendix fecal concretions, which corresponded to the shadows on the plate, were found.

5. In every case of long-standing pyuria, with negative findings for tuberculosis, the possibility of an existing calculous pyonephrosis, though suggestive renal symptoms may be entirely absent, should be considered and either verified or ruled out by a thorough radiographic examination of the upper urinary tract. The following case will illustrate this point:

A man of 40 entered the hospital with a severe pyuria, which was supposed to be due to a long-standing vesico-rectal fistula, acquired through a prostatic abscess in the course of a severe gonorrheal infection. The patient could only evacuate his bladder in a sitting posture, all of his urine in this way escaping through the rectum. Before operating on the fistula it was deemed necessary to rule out, by cystoscopic means, a possible ascending infection of the upper urinary tract. This examination, which was accomplished with great difficulty, demonstrated an infection and a marked functional deterioration of the right kidney. The diagnosis of right-sided pyonephrosis through ascending infection seemed to be so obvious that an X-ray examination was omitted prior to nephrectomy. The removed kidney, on being opened, was found to be filled with calculi of various size and configuration.

An aseptic right-sided nephrolithiasis had existed in this case before the onset of the lesion in the lower urinary tract, by which, in all probability, infection of the stone-kidney was caused.

6. In doubtful cases pyelography may clear up the diagnosis. Occasionally a stone, which does not appear on the plate, obtained by ordinary radiography, may be demonstrable through pyelographic exposure.

An extremely stout and fleshy man of 46, with a severe right-sided renal pyuria, and negative laboratory and guinea-pig findings as regards tuberculosis, showed on the renal plate upon ordinary radiography no evidence of a stone-shadow on the affected side, while, later on, two pyelograms, made at different sittings, demonstrated a distinct round shadow occupying the upper calyx, which on account of its difference in intensity was interpreted as a concrement-shadow.

7. Calcified tubercular foci within the renal parenchyma may on the plate look exactly like calculus-shadows.

A man of 41 entered the hospital in a state of anuria and complete uremic coma. Radiography showed two distinct shadows in the region of the right kidney, which were interpreted as calculus-shadows, but which, on exposure of the kidney, were found to be due to calcified tubercular foci.

8. An apparently typical stone-shadow may be cast on the renal plate by an object outside the kidney.

A characteristic stone-shadow was observed on the left renal plate of a young man who was under observation at the hospital on account of typical attacks of left-sided renal colic. At the operation nothing abnormal was found in the left kidney, while a tuberculous lymph-gland, corresponding in size and configuration to the shadow on the plate, was removed.

9. Small renal stones with rough surfaces (uric acid stones, or urates), which occasionally are not demonstrable on the plate, may cause a symptom-complex (severe hematuria, etc.), pointing to a grave kidney lesion (tuberculosis, malignancy).

A man of 80 came under observation on account of intermittent attacks of hematuria, which cystoscopically could be traced to the left kidney. On account of an apparently palpable enlargement of that organ, a renal tumor was assumed to be the cause of the hematuria, which, though, at the post-mortem examination was found to be actually due to a small and rough uric acid stone located in the lower calyx near the renal pelvis.

10. In cases where stone-shadows are present on renal plates of both sides, the existence of a fused or horse-shoe kidney should be borne in mind. Several such cases have been recorded in the literature of late, the last one by Lund of Boston in a recent report of the meetings of the New England Branch of the American Urological Association. I wish, in this connection, to report the following rare observation:

A man of 32 entered the hospital on account of severe pyuria connected with pain in the right flank, and septic fever. No important data as regards previous affections of the genito-urinary tract could be elicited from the history. Cystoscopy demonstrated a moderate subacute cystitis; both ureter catheters can be carried to the renal pelvis, but no urine is obtained from the right, and very little urine from the left catheter. Finally, after several cystoscopic sittings, a few drops of a very purulent fluid are withdrawn by suction from the right ureter catheter; the functional and microscopic comparative examination gave the following result:

| R. | L. |
|---|--|
| Sugar (after Phloridzin) | |
| 0. | 0.1 |
| Urea 0.001 | 0.031 |
| Microscop: Almost pure pus; a few small round epithelial cells. | A few pus cells, small round epithelial cells, many blood cells. |

Daily urine quantity about 1500 cc., daily quantity of urea between 15 and 25 grams. Irregular septic temperature between 100° and 102° F. Palpation of kidneys negative. Radiography shows typical calculus-shadows in both kidney regions almost symmetrically to the left and right of the second lumbar vertebra, a little below the 12th rib, and suggestive of being located in or near the renal pelvis. Pyelography did not materially aid the diagnosis, as almost all of the injected silver-solution ran back into the bladder.

Upon these findings the diagnosis of bilateral nephrolithiasis, with secondary infection and destruction of the right kidney (pyonephrotic stone kidney) was made. For obvious reasons the drainage of the right organ was considered the first and most imperative operative procedure.

Operation: Lumbar incision on right side. Upper pole easily freed, luxation of lower pole seemed impossible, therefore incision enlarged; the right kidney is now found to extend deeply to the left side of the abdomen toward the bony pelvis.

The kidney is finally brought up into the incision and found to be a fused or double kidney measuring 42 cm. in width, its right half is almost entirely represented by a sack filled with muco-pus, while its left half appears to be fairly normal. No line of cleavage between the two halves, which showed independent renal vessels and ureters. A calculus of the size of a large olive-pit is felt in the renal parenchyma just above the pelvis in either half of the kidney and removed by small incisions, which are afterwards closed with catgut sutures. The pyonephrotic sack of the right side is incised, emptied and drained by a rubber-tube. The kidney is replaced and cigarette-drains placed at the lower and upper poles of the incision.

Closure of wound by layers.

The following notes were taken three days after the operation: Patient rallied well from the operation. Temperature 99°, pulse 100, volume fair, general condition good. Only a few ounces of purulent urine are thus far obtained by catheter. Bandages wet.

All efforts, though, to increase diuresis failed and the patient died, about a week after the operation, under uremic and septic symptoms.

Important items pertaining to the genito-urinary tract are:

No break in peritoneum over kidney, and the loose tissue around it shows hemorrhagic infiltration.

Bladder filled with thick creamy pus, ureteral openings normal on both sides; right ureter runs up in normal direction.

Kidney is of horse-shoe variety, whose right pyonephrotic half is drained by an incision, in which is a drainage tube.

There are two renal arteries slightly smaller than normal.

The two adrenals are in normal position.

Death was, according to the autopsy report, due to infection of the loose tissue around the right half of the kidney, recent peritonitis and broncho-pneumonia.

In the presentation of the observations, enumerated above, many diagnostic errors were reported, which occurred in spite of the application of the most modern apparatus at our disposal in the diagnosis of surgical kidney-lesions. It is by the candid report of such errors that our knowledge is materially enhanced and that mistakes in the future can be avoided.

Discussion.

Dr. W. P. Willard: I think one point should be brought out in the diagnosis of nephrolithiasis, and this is the uniformly poor plates we get as a rule of kidneys. The radiographers seem to be content with a plate that oftentimes will not show a renal calculus. I had a case the other day in which I insisted upon two or three plates being taken before the calculus was demonstrated. Then it showed up quite plainly.

I would like to ask Dr. Krotoszyner, with regard to this horseshoe kidney, whether he removed the calculi on both sides through the same incision.

Dr. Julius Rosenstirn: I would like to ask Dr. Krotoszyner whether some of these errors in diagnosis, with regard to stones or calcified mesenteric glands, would not be avoided by the stereoscopic exposure of the X-ray picture. We have for some time been taking such pictures in the Mount Zion Hospital with excellent results, and

have received from them great aid in the accuracy of our diagnosis.

There is no doubt that, with a modern stereoscopic view, a much more definite relative location of shadows can be made, and some of the errors of the kind that were mentioned here to-night might be avoided in the future.

Dr. Krotoszyner, closing discussion: In answer to the first question I wish to state that the horse-shoe kidney was exposed by one large incision in the right loin of the patient. The stones were then removed through two small incisions in the renal parenchyma just large enough to permit of their extraction. If we would have been able to obtain more direct evidence by any of the many methods of examination, including pyelography, applied in this case, we might have been able to make a better preoperative diagnosis and to formulate a more rational operative procedure, and I have reported the case in order to give others a chance to avoid, if possible, similar errors in the future.

I have not had much experience with stereoscopic radiograms, but I do not think that we would have been able, even by this method, to answer the question whether the location of a certain shadow was within or outside the renal parenchyma. The case presented in this connection demonstrates another possibility for a diagnostic error, if we rely solely upon radiography in the diagnosis of renal lithiasis.

PEDIATRIC SITUATION IN EUROPE AND THE EFFECT OF THE WAR ON THE SAME.*

By JOHN ADAMS COLLIVER, A.B., M.D., Los Angeles.

You have asked me to give you a résumé of the pediatric situation in Europe, and the effect of the war on the same. In doing this, I will briefly confine my remarks to my own experience and observation, taking each place in turn, and pointing out the things which to me seem most characteristic.

London: My observation here is confined largely to Great Ormond Street Hospital for Children, and the children's wards in the University Hospital. The Great Ormond Street Hospital has the largest out-patient department of any of the hospitals I have visited in Europe. There is a regular post-graduate school in connection with the hospital, in which you can register in small classes for the out-patient work, or you can become a clerk to an assistant in the out-patient or to the visiting staff of the hospital proper. The clerks are expected to write up the histories and also make physical examinations, and in the hospital to do at least part of the routine laboratory work. The amount of material in the out-patient department is so abundant, and assistants so few, that the examinations are necessarily in most cases somewhat superficial.

In taking the history of a feeding case, little or no attention is paid to the previous diet. You find history after history simply reading, "the child was off its feed." There is seldom any reference to the character of the previous feeding. There is little or no attempt at modification, but a great deal of sodium citrate is used in the milk. The children are practically all of very poor parentage, and convalescents in the hospital among the older children do better on bread with tallow

"drippings," than they do with butter, because they were used to it before.

London has the most poorly dressed, poorly nourished, poverty-stricken children of any of the cities I have ever visited. As a result, they have the greatest number of malnutrition, and later, rachitic cases. The latter exhibited some of the most extreme bony deformities. After seeing so many such cases, I can easily understand why rickets is called "englische krankheit."

In connection with the hospital out-patient department, there is what is called the "Casualty Department." This corresponds to our minor surgical department. Small operations, like removal of tonsils, adenoids, circumcisions, opening abscesses, are performed here. It is here that so many tonsil operations are performed by the Waugh enucleation method. It is rapid, clean, and complete, and with but little hemorrhage. I have seen Mr. T. Babbington Ward do as many as eleven, together with the adenoids, in less than an hour. Mr. Waugh's instrument is used in all these cases, and chloroform was the routine anesthetic.

There is no better place in the world to study rheumatism and its manifestations and complications, than in London. I was a daily visitor, and special student in Drs. Poynton and Still's clinic, and saw many rare rheumatic complications. Dr. Poynton, who has made more of a study of rheumatism in children than any other man in England, and the world perhaps, told me there is more rheumatism in London, than anywhere in England. He has done but little in the last few years on the bacteriology of rheumatism. Nearly all cases start, or are associated with chorea. The nodules, seldom seen in America, are very common. They are so large, that in many cases palpation is unnecessary. You can see them. The most common locality is on the elbows, the spinous processes, and sometimes on the tendons. Many times they stand out like grains of corn under the skin. These, Poynton considers as rheumatism in miniature. They are a bad prognostic sign, and nearly always associated with marked cardiac symptoms, endocarditis.

Closely related to rheumatism, with its characteristic deformity, is Still's disease. More cases are seen here than anywhere in the world. These were practically all in Dr. Still's wards. They were being treated with radium. Sometimes it was thought an improvement was noticed, but it was only transitory, and it was agreed that no marked permanent benefit followed its use.

Other interesting things observed, were a great number of apparently primary pyelitis cases. There was also an epidemic of scarlet fever. I saw a number of rare cerebellar tumors with most interesting and characteristic symptoms operated by Mr. Waugh, with complete recovery.

A very unique feature of the London pediatric relation, was the meeting of the Pediatric Society at the Royal Academy of Medicine. At this meeting, each man presents his case written up in detail, with history, and physical findings. The cases are numbered with large numbers, and

* Read before the Symposium Medical Society, Los Angeles, April 21, 1915.

each member has a printed history of the case before him. You go from case to case, like so many exhibits, and make your own examination or observation. Many of the cases are brought here for diagnosis. After spending an hour with the cases themselves, the children and parents are allowed to return home, and the society meets in the assembly hall, and discusses each case.

On the whole, English physicians are not so accurate in their diagnosis, and have a tendency to use more drugs than in other places.

Paris: An investigation of the Juvenile Court was made in every city of importance. This was all my time permitted in Paris. Many moral points of view, and the way the public looks upon illegitimacy, near-white-slave, etc., would, I am afraid, be somewhat shocking to many American court workers. For instance, girls working in stores are given leave of absence to give birth to an illegitimate child, and then taken back as soon as they are able to work. A new Juvenile Court law was passed, but has never gone into effect as yet.

Munich: The most striking thing about Munich, which seemed characteristic of all the German cities, was the great emphasis placed upon hygienic and prophylactic measures. For instance, all children must be vaccinated when they reach a certain age. The health department sends out a notice when the child reaches the age of two. The method of vaccination consists in making four minute incisions with a fine scalpel, which has been dipped in the virus. These knives are then sterilized, by being placed on a revolving disk, so arranged that each knife passes through a flame. This method of vaccinating leaves a very little scar, contrasted with the big English scar, and it was a very rapid and clean method. An officer in charge told me that the department had vaccinated as many as 600 in one hour. I saw one complication following vaccination, which consisted of large blebs in the mouth and throat, and edema about the uvula. This was accompanied by temperature, loss of appetite, etc. Their statistics showed that one case in 3,000 was affected in this way.

Pfundler's clinic in the university was well attended. Representatives were there from all parts of the world, except England. Pfundler's clinic is not large, and he has remarked that he had more assistants than patients. All courses are given in German.

One of the very important features of this clinic is the milk station. They not only gave out modified milk, but tea. One of the most unique milk bottle washers and sterilizers that I ever saw, was in this clinic. The apparatus consisted of a large wheel, about ten feet in diameter, which picks up the bottles, washes them inside and out, sterilizes them with boiling water, and deposits them again. In connection with the milk station, there is a normal infant clinic which tends to keep the child in sound health. The best one in America, compared to this, is found in Toronto.

I did not see or hear of a case of typhoid or malaria in Germany or Austria. It is authentically told, that only one case of typhoid was discovered

in Munich in several years, and this was traced to a dairyman, who had it in his family a year before. The dairyman not only lost his business, but was imprisoned for nine years.

In our country we talk much of "swatting the fly." In Munich, and many German cities, they go beyond this, and starve them to death, by keeping the streets so clean that there is nothing for the flies to feed on.

Great case is taken of the infants and school children. All children are well provided with clothing and shoes, and when the parents seem unable to do this, the government does it.

Another very important feature which preserves the health of the child, is a two-hour intermission from school at noon time, for eating and resting. An excellent and most needful thing to introduce in American schools.

Another feature which illustrates the endeavor of the Germans to preserve the normal, and educate the laity, is found in the workingman's museum. In this, you see models, diagrams and concrete illustrations, showing the relative values of foodstuffs, necessitative cleanliness, and care of the child (including care of the eyes and ears), the most efficient and inexpensive way of making infants' beds and bedding, the preparation of foods, etc.; also information about every conceivable occupational disease, with its complications, and everything bearing upon the health of the child and parent. In addition to this, the government issues bulletins bearing upon health conditions, which are sought and read.

Vienna: My observation in this city is confined largely to Professor Pirquet's Kinderklinik in the University of Vienna, where I was a voluntary clinical assistant. I visited, however, St. Anne's Spital, and the Polyklinik. Professor Pirquet's Kinderklinik is one of the best equipped, and best organized children's hospitals in Europe. All of his assistants are able and enthusiastic workers. Each one is a specialist in some certain line of work. They all do research work, and have the scientific spirit so thoroughly fixed in them that very few of them encourage outside practice or consultation. When they enter they expect to devote their entire life to their particular line of work. Docent Schick could enjoy a big consultation practice, but he prefers the hospital work. With the exception of Docent, none of the assistants receive remuneration. They receive their room, but pay for their board. All voluntary assistants in the hospital must understand German, and agree to stay at least from six months to a year, before they can enter. In addition to the hospital and clinical work, all assistants are encouraged to carry on as much research work as possible.

There are two things which stand out most conspicuously in this hospital; one is the contagious ward, and the other the tubercular ward. Many of the contagious cases are placed in the famous glass "box." This consists of several rooms, separated by glass partitions running to the ceiling. Around the outside is a corridor, into which doors open from these rooms, where the doctor and

nurses enter. The center corridor communicates with the outside, and is used only for visitors. In the "box" we find diphtheria, measles, gonorrhea, scarlet fever, and other contagious diseases, side by side. In addition to the box, there are two other wards devoted to contagious diseases.

Tuberculosis: The tubercular wards in this hospital—the hobby of Professor Pirquet—are always filled. It is in charge of Assistant H. Koch. In addition to the tuberculin treatment, great advantage is taken of the open air and sunlight. During the winter months, the children are wrapped up and kept on the roof, while in the summer they are in the same place, the majority of them with no clothes on, becoming as brown as Indians, and wearing nothing but a hat. I have seen marvelous results in tubercular peritonitis and adenitis, as well as in pulmonary tuberculosis.

Tuberculin is given twice a week. Before each time of giving each child has a Pirquet test, and accurate measurements and observations of the reaction made every two hours to four hours thereafter. A new place on the body is used with each injection. A diagram of the body is made, with a different number on it for each time the injection is given, e. g., if the injection is the 12th, it always goes in a certain place, and after about 20, they start over again.

There is no place in the world where the X-ray is more freely used as part of the routine examination. Practically all of the cases are screened, all pulmonary cases are screened and Röntgenographed, and all rare cases photographed in colors. The Pirquet tubercular cutaneous test is made on all children entering the hospital.

The epileptic ward, in charge of Assistant Janusche, formally a special student of Professor Meyer, has some of the most beautiful colored charts illustrating the effects of certain drugs upon the intensity, number of attacks, etc.

The same system of colored charts is used in nephritic and feeding cases. In the feeding cases, the different colors represent different ingredients of food. They are all fed on the caloric basis.

The psychopathic ward, which is run in connection with this Juvenile Court, well illustrates the necessity of accurate observation, and study of delinquents.

I have never, in any hospital in the world, seen so many manifestations of syphilis in children; keratitis, epiphysitis, periostitis, etc.

It was during my stay in the Kinderklinik that the first children with icterus hemorrhagica were sent for operation to the Eiselberg clinic, Prof. Ranzi operating. I remember one case with a red count of 800,000, increasing to a little over 4,000,000 within three weeks after splenectomy. As far as I know, all did well afterwards, with one exception. This one died of embolism about three months after operation.

A hundred per cent. of the deaths are posted, thus making one of the best places in the world for pathological study, especially when coupled with courses of Erdheimer.

I was surprised to find Hamberger treating pulmonary tuberculosis by suggestion. He claimed

that in many cases the temperature and all symptoms subsided.

Berlin: The most conspicuous thing in Berlin is the infant feeding of Finkelstein and Meyer. (My visit to Berlin was made about two months after the war had started.) At that time, Finkelstein had practically but one assistant—a lady physician. Prof. Finkelstein's work then was necessarily hasty and superficial. Everything was more or less disorganized. A very interesting feature is a separation of the beds by a glass partition running up 5 or 6 feet, and some wards have cheesecloth or muslin partitions separating the beds.

The effect of the war on pediatrics had been marked. Everything has given place to war. For instance, over one-half of the beds in Professor Pirquet's Kinderklinik are turned over to wounded soldiers. Over half of the out-patient service was cut off. Before the war began, clinics were held morning and afternoon. All morning clinics were at once cut out. Only the most urgent cases were admitted to the hospital. Work was disorganized, superficial, hasty, and under great tension. Teaching and research has stopped. Practically all of the assistants who were doing such wonderful research work, are now devoting their energies to army and sanitary service. Assistants Göer and Kossovitz were compelled to stop their work on immunity of the new born, and Kossovitz is at present a prisoner in East Siberia. Göer, for the last three years was doing some work in diphtheria immunity, which promised valuable results. Meyerhoffer's work on metabolism was stopped, and he devoted himself to army duties. Rache is at the front; his work on X-ray in tuberculosis and intestinal diseases has ceased. Assistants Nobel and Hecht were carrying on the most interesting and promising stage of their research work with the electrocardiograph. Both men are now at the front. H. Koch's special study of tuberculosis and tubercular meningitis, and work on intubation has stopped, although he is still at the hospital. Docent Schick is also in the hospital, although doing no research. His cutaneous diphtheric reaction and other equally important research work is discontinued. Prof. Pirquet was about to give to the world (the result of his latest work), some new tubercular theory, but he, too, is now devoting a large part of his time to the wounded soldiers occupying his hospital.

Summary: Liverpool for orthopedics; London for mal-nutrition, rheumatism and its manifestations of chorea, endocarditis and nodules; Munich for hygiene, prophylaxis, health regulations and food stations, and preservation of the normal; Vienna for tuberculosis, syphilis, X-ray, pathology and research work; Berlin for infant feeding; America for practicability and some of the best of all.

If the war would stop today, it would take Germany and Austria more than a generation to regain the position they have so long held in the scientific world.

I believe one of the effects of the war will be a tendency to shift this scientific and research spirit to America.

TUBERCULOSIS OF THE FEMALE GENITALS.*

By J. W. JAMES, M.D., Sacramento.

The most important phase of tuberculosis from a gynecologist's standpoint is, as in so many other branches of medicine, *diagnosis*. The most frequent of the infections are probably those infecting the organs involved in the excretion of urine; but this brief article deals only with those organs essentially female, viz: the uterus, tubes and ovaries and the external genitals.

The frequency as well as the very existence of tuberculosis of these organs as an entity has been disputed; of course, it is well known they become diseased as a part of a general tuberculous infection, i. e., secondarily infected. Tuberculosis, therefore, for a long time was not considered as belonging to gynecologic affections; during the last two decades, however, it has been gaining in prominence. Von Winkle and his associates after investigation of a large number of cases, postmortem, found that of the diseases affecting these organs only 1% were tuberculous. A. Hegar in his investigations found tuberculosis of these organs to vary in prevalence in different localities and that also 1% was far too small a percentage; in Griefswald, in a series of purulent diseases of the adnexa, 24% was found to be tuberculosis while in Leipsic, Menge found 7.4%.

The literature is not very replete with percentages of this disease compared with other pathological happenings, but attention is very frequently called to the presence of tuberculosis. Kelly calls attention to tuberculosis of the tubes as a cause of sterility; also states that in several cases in the routine examination of uterine scrapings tuberculosis was found where it was not suspected. Kelly also emphasizes Leopold in saying pruritis is almost always due to chronic endometritis, and one of the prominent causes of endometritis is tuberculosis. In a paper by J. S. Cullen (Johns Hopkins Hospital Reports, Vol. 10, p. 91), he reports several cases of tuberculous endometritis. Tuberculous endometritis has been found in uterine myoma when microscopical examination was being made, tuberculosis not being suspected.

The route by which tuberculosis reaches the internal genitalia is also disputed. A. Hegar thinks there are three routes, the hematogenous, the ascending and descending—that is, infection downward by extension from the peritoneum to the genitalia—and ascending by extension from the vulva. Martin and Jung from the University of Griefswald, think that Hegar has laid too much stress on the ascending and descending method—that by far the most important route is the hematogenous.

The great difficulty in arriving at a conclusion as to whether the infection is primary or secondary is obviously to find the primary infection. Amann has laid down a law, that is, "The disease shall be called primary only in those cases where another tuberculous focus cannot be found in cadaveric section." This, of course, means that there

are an extremely small number where hematogenous infection can be excluded. The fact remains, however, that a direct communication with the outer world exists; why cannot the membranes of the genital tract become infected as in the respiratory tract?

Baumgarten has shown us that T. B. introduced into the vagina of a hare never traveled upwards; also that it was unsuccessful in procuring an infection of these organs by introducing T. B. into the peritoneal cavity. He always got T. B. of the uterus and vagina, however, when T. B. was introduced into the tubes. Baumgarten denies the ascending mode of infection. Jung and Bennecke in their experiences obtained ascending infection in 10% of cases. Martin and Jung from their experiments make the following statement:

1. Where another recent T. B. focus can be demonstrated in the body in addition to the genital infection, a secondary hematogenous infection must be taken for granted. (This group covers the great majority of cases.)

2. When T. B. of another organ cannot be proven an ascending primary infection is to be accepted as probable. (This group is less numerous.) It is proven by animal experiments that non-motile T. B. bacillus can spread upwards against the force of secretion.

The demonstration of the tubercle bacillus in the secretions is very difficult without culture methods; it is also very difficult to demonstrate them in the tissues, Sellheim laying great stress on the difficulty. Jung claims, however, that with proper care and the right technic a large number of these cases can be demonstrated—he used the formalin-alcohol method of fixation with Ziehl-Nelson stain. We also have animal inoculation, the injection of a guinea pig being always easy.

In point of frequency of infection, the tubes easily head the list; the next the body of the uterus; rarely the cervix and ovaries; very seldom the vagina and vulva on account of their resistant epithelium and acid secretions. Many authors claim that the undisputed evidence of the post-mortem table shows infection of the tubes alone with T. B. nowhere else in the body. The T. B. has supposedly traversed the vagina and uterus without causing harm until they lodged in the tubes.

There are two forms depending on the virulence of the infection, the resistance of the patient and very probably the mode of infection. The first form, the so-called miliary form, is the form most likely caused by extension. The mucous membrane is first attacked and presents the usual picture of a catarrhal inflammation; giant cells and epithelioid tubercles are formed in the folds of the mucous membranes but T. B. are scarce. Guinea pig inoculations, however, soon show the cause of the inflammation; the tube walls are only moderately thickened; the muscular and serous coats are not generally involved. This form positively cannot be diagnosed without microscopical examination or animal inoculation. Of course, the disease may progress to destruction of the tube or it may heal with destruction and atrophy of the

* Read before the Sacramento Society for Medical Improvement; June 15, 1915.

parts. The fimbriated extremities remain open, unlike other inflammations, until the disease is quite advanced; this is due to the slow advance of the disease, the mucous membrane becoming so thickened that it is thrown into a somewhat spiral formation, these spirals then adhere to each other, thus obliterating the lumen. In other inflammations the progress is more rapid, going out at the fimbriated extremity, sealing it and converting the tube into a closed sac. The second form is as in other inflammations; the tube is converted into a closed sac sometimes as large as an orange, the contents being cheesy masses. Mallory found tubercular tubes weighing two pounds. The tube may rupture into the bladder or rectum or general peritoneal cavity; the only difference between this and the other forms clinically is the slow onset and more chronic form of symptoms, the temperature, etc., being lower and irregular, as in most T. B. infections. The second or cheesy form is very probably a hematogenous infection.

THE UTERUS.

T. B. of this organ occurs oftener than is noted. It is usually associated with tubal T. B. but may be involved alone and cases have been reported where endometrial scrapings showed presence of T. B.—after that the patient entirely recovered from the trouble.

All so-called catarrhal discharges of persistent nature when originating in the uterus should be carefully watched; a guinea pig inoculation is at least easy to perform if a curettage is not obtainable. Histologic matter is sometimes hard to get. The uterus as in the tubes has the second variety showing like changes, the whole organ being infiltrated with infection, the cervix often escaping, the entire uterine cavity is filled with cheesy masses. This enlargement with lack of menstruation has been mistaken for pregnancy. Sometimes ulcerations occur on the cervix and vaginal walls which look very much like lues; another form in which a cauliflower-like mass which is a mass of T. B. tissue, bleeding easily, has been mistaken for carcinoma. The microscope easily furnishes a means for differentiation.

Primary infection of the vagina and vulva are rare but do occur—the mucous membrane and squamous epithelium giving excellent protection. The vaginal ulcer is a flat ulcer with indurated edge slowly extending.

T. B. ulceration, primarily of the vulva, is very rare but Rieck and Viatte report several cases; the ulcers tend to form fistulae, extending up into the vagina; the process presents peculiar clinical features not unlike lues, elephantiasis or rodent ulcer—the microscope again giving the differentiation. The ovaries have never been known to have primary T. B. but of course are involved secondarily.

In prophylaxis—the care as well as the treatment is obvious—I could not find one authenticated report where a tubercular epididymitis was a cause—but there is a possibility. General cleanliness and care in labor, and also greater care in examinations and operations in the vaginal tract being very necessary, is also obvious.

PERSONAL EXPERIENCE WITH CHOLECYSTECTOMY.*

By LEWIS W. ALLEN, M. D., San Francisco.

In responding to the call for a paper before the society, it is my intention this evening to place before you my experiences in gall bladder surgery and my conclusions deduced therefrom. I will not attempt any historical review of the subject as that can be found fully developed elsewhere. So also with the etiology, symptomatology and diagnosis—fascinating as each of these subjects is, it is contrary to the purposes of this paper to enter into their discussion.

Considering therefore that a diagnosis of cholecystitis has been made there arises in the mind of every surgeon several questions:

Which method of treatment will relieve the patient?

Which method will *cure* the disease, as at that time developed, with the least possible risk to the patient?

Which method will not only cure the disease then present, but also give the greatest assurance of *permanent* relief from recurrent attacks as well as from future complications?

Being of a conservative nature, it is my practice to attempt to relieve the symptoms, rather than rush to operation, all cases in the early stages of cholecystitis in which such symptoms show no systemic infection, or at most very mild infective processes. For I have found in some few cases of cholecystitis, as in some cases of appendicitis, with the subsidence of the attack, the administration of liberal doses of olive oil, an increased care in the diet, both as to its character, quantity and time of ingestion, so as to properly meet the needs of the individual, together with the supervision of the bowel elimination, that in relieving the symptoms the disease to all intents and purposes has been cured. The attacks have not recurred and the patient has remained well.

But where the attacks recur with accompanying gastric disturbances, or where the local inflammation progresses to a more and more serious systemic infection, operation is the only method of procedure. There has been a great deal written upon calcareous and non-calcareous cholecystitis, but clinically in determining upon the necessity or non-necessity of an operation it makes little difference whether there are stones present or not. To be sure when a first attack is subsiding and the pain has been distinctly of colicky type we may prophesy, within our own mind, the probability of recurrence. But sometimes it does not recur, and on the other hand some cases of large stones in the cystic duct or within the gall bladder do not give a typical gall bladder colic as some cases of mucous plugs in, or angulation of the cystic duct, do give a typical colic. Therefore, I repeat that, clinically in determining the necessity of an operation, we are only concerned with the *recurrence of the attacks* in the sub-acute and chronic cases, and in the acute cases, with the *progress of the infection* as exhibited in the increase of the local symptoms, the pulse, the temperature, the leukocytosis,

*Read before the San Francisco County Medical Society, January 12, 1915.

the dry tongue, the onset of chills, showing a general systemic invasion.

Having decided that an operation is necessary, the choice between a cholecystostomy and a cholecystectomy should, generally speaking, be determined only after entering the abdomen. The judgment and experience of each surgeon will necessarily influence his choice in each individual case in answering the second and third questions as above stated. He must ask himself not only which method will cure the disease as at that time developed, with the least possible risk to the patient, but also which will give the greatest assurance of permanent relief from recurrent attacks as well as from future complications?

Before discussing the arguments for or against the one or the other method of operation, let us first classify the various types of gall bladder disease which may be found on opening the abdomen. Clinically they all fall within the general classification of acute and chronic cholecystitis. In the acute types we have the catarrhal, empyematous and gangrenous, with the possibility of the grave complications of cholangitis and general septic infection, and the lesser ones of pericystic abscesses and pancreatitis. In the chronic types are found all the various changes in the walls of the gall bladder and its relations with the surrounding viscera from moderate thickening of its walls to complete obliteration of the cystic cavity; from stenosis of the cystic duct to complete occlusion; from pericystic adhesions to firm attachment to or ulceration into the neighboring organs.

Trouble in the common duct must necessarily be considered as a separate surgical entity which will influence the surgeon's judgment according as to what condition is found. For simplicity's sake I will omit the discussion of common duct disease in this paper.

Although I am a firm believer in conservative surgery, I come before you tonight as an advocate of the more radical operation of cholecystectomy. My first strong leaning toward the more radical operation came just thirteen years ago, in January 1902, after a cholecystostomy for gangrenous cholecystitis and the autopsy findings following the death of the patient on the eleventh day. As the years passed and I observed the swing of the pendulum from cholecystectomies to cholecystostomies, I have carefully analyzed the arguments of the eminent surgeons in favor of the less radical operation but they were not sufficient, in the light of my own experience, to cause me to change. Many of these arguments for and against cholecystostomy and cholecystectomy can best be impressed by illustrative types while others will be summed up later.

I would not have you understand that I never do a cholecystostomy; that there are no cases cured and relieved, beyond a fairly reasonable doubt of future complications by the less radical operation. Such cases, for instance, are the catarrhal ones operated upon fairly early either for stones or mucous plugs in which the inflammation or obstruction has not been of sufficiently long standing to produce marked changes in the cystic wall, or in

the attachment of the wall to the surrounding viscera. It has been my experience, however, that patients seldom submit themselves to operation in these mild cases. Many of these that come under observation are relieved by dietary measures, especially those of the mucous type.

Coming next to the empyematous and gangrenous cases I believe they should be considered together. Not that there are not some purely empyematous cholecystitis and others that are distinctly gangrenous but that many are *both* empyematous and gangrenous. It is often impossible to tell even with the abdomen opened and all previous data in mind, although being sure of an empyema, whether gangrene has developed in the walls or not. The above mentioned case is a sad illustration of this condition. Mr. R—, a physically robust man, in the prime of life, with no previous history of gall bladder disease, was suddenly seized with acute pain in the gall bladder region, followed by such signs of collapse that he was sent the same day to the hospital and operated upon within twenty-four hours of the first pains. The gall bladder was drained as well as an abscess between it and the liver. He was relieved, but the signs of sepsis continued until his death on the eleventh day. Autopsy showed over forty ulcerations of the mucosa with areas of gangrene extending from many of these ulcers into the middle layer one-half inch to one inch in circumference. None of these gangrenous areas were visible upon the surface of the gall bladder. Between the gall bladder and the liver, about one and one-half inches from the end of the abscess opened at the time of operation another ulcer had perforated and pus was found extending in a thick creamy layer around on to the under surface of the left lobe of the liver. A stone the size of a pea had produced the obstruction. Observation at the time of operation could not detect this intermural gangrene, or the perforating ulcer between the gall bladder and the liver far back toward the cystic duct. Drainage was entirely insufficient. Since then I have had several similar cases of multiple ulcerations on the mucosa which, when examined after removal revealed sloughing areas beneath. They have all promptly recovered following a cholecystectomy. Temperatures of 104° and 105° have dropped immediately to 99° and 100° with perhaps a slight rise for a day or two. Pulses of 110 and 120 have dropped to 90, and then lower. The subsidence of the symptoms has always been commensurate with the length of time of the infection. Early radical operation in these severe cases has always been followed in my experience with an equally quick recovery. It has been my fortunate experience to have had no deaths following cholecystectomy. Now, in the swing of the pendulum from cholecystectomy to cholecystostomy some nine or ten years ago most of our writers advocated the drainage operation for empyemas. One reason that I was not convinced that this was the operation of choice was because of my experience in such cases as above illustrated. You can not always be positive that gangrene is not present,

or imminent. If present or prospective, drainage is not sufficient.

On the other hand, take a simple empyema case. Drainage may cure the attack then present and the gall bladder may recover to nearly normal. But is it ever normal? And if it is normal in some cases, is it normal in all? With the numerous folds and trabeculae often present can drainage be implicitly depended upon for removal of all foci of later infection? I am convinced that it cannot. Can it assure us a guarantee against holding some nidus of systemic infection? I am convinced that it cannot. Can we convince ourselves as we palpate a drained gall bladder that no damage has been done to the submucosa sufficient to produce later a stricture of the cystic duct, or at the neck of the gall bladder, even in the presence of the free flow of bile, which will give future trouble? I am convinced that we cannot. In 1905 I presented before this society just such a case. A cholecystostomy had been done for cholelithiasis some months previous. A permanent biliary fistula resulted. There was no colic, no mucus, no common duct symptoms. The stools were normal color. The diagnosis of stricture at the neck of the gall bladder was confirmed by cholecystectomy. A counterpart of this gall bladder with stones intact, one in Hartmann's pouch with a firm stricture and a one-eighth inch lumen leading into the gall bladder, was present in one of my cholecystectomy cases. The former after draining for months needed a second operation; the latter was cured and out of the hospital in thirteen days. The point I wish to make is that it is often impossible by palpation and inspection to determine the amount of damage done, or in what condition the gall bladder tract will be left after repair.

For the out and out gangrenous cases most surgeons have advised cholecystectomy. There have been a few, however, who have claimed better results from drainage even in these cases. Such cases would have to be in extremis indeed before I could be satisfied with drainage, and then only with the expectation of future removal in the event of the very improbable chance of recovery. For in such the gall bladder is left in a badly damaged condition.

In the chronic types of cholecystitis both calcareous and noncalcareous, I am an advocate of cholecystectomy unless one can be positive that the biliary tract is unimpaired and will become normal through drainage. In my opinion such assurance can be held with regard to but few of those cases coming for operation after months or years of trouble.

I admit the choice between cholecystostomy and cholecystectomy in many doubtful cases will depend upon the judgment of the operator as evolved from his experiences and the importance which he gives to certain reasons for and against the one or the other operation. Let us then consider some of the arguments set forth by advocates of cholecystostomy.

First, less danger. I believe that this statement had more weight five years ago than now. Even then it applied only to the old or feeble in whom

the margin of safety was very small because in my experience the shock of cholecystectomy is little more than cholecystostomy. The chief shock—the opening of the abdomen—is the same in both. The time of exposure is little different if one goes right at the business of removal. In the bad empyematous and gangrenous cases this is more than counterbalanced by the removal of the large area of septic absorption. Now, however, since it is possible to remove the gall bladder after the injection of morphine and hyoscine by local anesthesia, the margin of safety even in the aged is practically the same. Six years ago I operated on a patient seventy-four years old suffering from suppurative cholecystitis by this method. The omentum was found walling off an abscess containing stones outside the gall bladder. Stones and pus were also removed from the gall bladder, but still no bile flowed, and feeling that in this case I must be sure of immediate biliary drainage I went on and removed the gall bladder. She awakened the next morning and wanted to know when we were going to do the operation. With the more recent introduction of anoci-anesthesia the difference in the shock in the two methods is practically nil.

Second, because it is nature's provision. Because it has important functions, first as a safety valve of the biliary system—acting as the vis-a-tergo of the bile. There is no proof that this is a necessary function except the fact that a compensatory pouch has been found at the site of the amputated cystic duct. This can equally well be taken as evidence that nature is able to renew this function. Even the presence of such a pouch is not proof that such a pouch is necessary to health, but only, that given certain conditions, it will form. Against this argument is the fact that patients who have had their gall bladder removed have remained in perfect health for years. I have yet to experience the fact of a patient upon whom I have performed a cholecystectomy even returning to my office complaining of digestive disturbances. Then again it is asserted that the gall bladder is needed for drainage of the biliary passages. To this I would respond that they can be drained as long as desirable through the stump of the cystic duct, and also with the gall bladder removed, one large factor in the need for such drainage has been removed.

Third, that it is needed for drainage of the pancreas to assist the cure of an accompanying pancreatitis. This statement I have been very much interested in. I have had the biliary discharge from drainage cases examined again and again for evidence of pancreatic secretion. In not a single case has any evidence of pancreatic secretion been found in such fluids. Nor does the skin ever exhibit any signs of excoriations as are found about a pancreatic fistula. With the removal of the gall bladder as the chief focus of infection pancreatitis subsides as quickly as, or even quicker than after cholecystostomy. The other argument that a diseased gall bladder should be saved for the possible treatment of a future pancreatitis is an imposition on one's common sense.

Fourth, gall stones may form later in the common and hepatic ducts. Fortunately this oc-

currence is rare. As W. J. Mayo¹ observes, "I have never seen hepatic duct stones without evidence that the original disease had its source in the infection of the gall bladder or common duct, and the common duct infection was almost always secondary to the gall bladder disease." With the exception of those cases, usually giving histories of common duct obstruction, in which a stone or stones have escaped detection, the removal of the gall bladder as a source of future infection would practically eliminate the formation of such stones.

Fifth, the possible use of the gall bladder in case of chronic and irremediable obstruction of the common duct. This fortunately is rare and there can be no arguments as to the advantage of having a gall bladder present for anastomosis. Yet the operation without the gall bladder though difficult is not impossible. On the other hand, against this rare dilemma, must be placed the many dangers, some very grave, of having a diseased organ intact.

Some of the reasons for the radical operation may be enumerated as follows:

First, fistula, mucous or biliary, either persisting from the time of the cholecystostomy, or developing later, sometimes after a period of two or three years. Although this condition in no way endangers the life of the patient yet it is very annoying both to the patient and to the surgeon. Especially here in the west where most patients must pay at least their hospital expenses it is oftentimes a matter of serious financial embarrassment. Of course this point should not be considered if the life of the patient would be jeopardized by the more radical operation. As I stated above, however, it has been my experience that very few cases indeed would be so jeopardized. The more rapid recovery, the more permanent enjoyment of good health following cholecystectomy has confirmed my early belief in the more radical operation. In favorable cases, especially in the acute cases, the sinus may be allowed to close in five days or a week, and the patient leave the hospital in two weeks all healed.

Second, the infected gall bladder as a nidus of future infection, either locally or systemic. It is claimed, and with truth I believe, that it is almost impossible to thoroughly sterilize all the crypts and folds of a diseased and thickened gall bladder wall. This, of course, depends upon the amount of change that has taken place, but granting that it is thoroughly healed, what guarantee is there that it will not later be reinfected? The greatest difficulty, however, is to be sure that no irremediable condition has been inaugurated in the chronic cases, and in the acute cases just what progress toward such conditions will follow the subsidence of the acute attack. Only experience will tell this, and the swing of the pendulum in the last year or two, which is only now gaining full headway, brings the conviction that led Dr. Crile of Cleveland to state personally to me two years ago that he thought more gall bladders would have to be taken out in the future than had been the custom during the past few years.

Third, the possibility of the development of cancer in a diseased gall bladder, especially fol-

lowing cholelithiasis. In 95% of all cancers of the gall bladder stones are present. Then again, the number of cases of cancer of the gall bladder is variously quoted from 5% to 15%. But most important of all is the fact that those cases in which the cancer is discovered only after the gall bladder has been removed have remained in good health without recurrence or metastasis, while those large enough to be demonstrable at the time of operation have succumbed to the further progress of the disease.

It is not my purpose here to mention all the self-evident conditions requiring the removal of the gall bladder as mentioned in Deaver's² conservative article, but to strongly protest against the teaching that only when the gall bladder becomes functionless cholecystectomy should be done. I am firmly of the opinion, as Dr. Lilienthal, in 1904,³ and again in 1911,⁴ has ably concluded, "that, as a rule, any gall bladder which is worth operating on at all for biliary disease may with advantage be removed; that in the majority of cases this removal may be safely accomplished at the primary operation; that when for any reason this procedure appears dangerous, or otherwise undesirable we should look forward to completing the work at a subsequent sitting."

One word as to the technic of the operation. Contrary to the advice of most writers, I have found beginning at the fundus and working down, separating the gall bladder from its attachment to the liver, to be much simpler and easier than the more usual method employed of attempting to tie off the cystic artery first. I have never had any trouble from hemorrhage that a pad under a retractor in the hands of an assistant did not control. Usually such hemorrhage is negligible, especially if the separation is begun slightly to the gall bladder side. With the elevation of the patient into an exaggerated lordosis position after, not before, the abdomen is opened, the gall bladder is brought right up into the wound as the separation progresses, making ligation of the cystic artery and duct very simple and easy. My experience with this method has been so favorable that I have found no reason to change. You attack the parts nearest at hand and gradually bring the deeper structures within easy reach which satisfies the greatest principle of surgery—the surgery of common sense—i. e., seeing what you are doing, or bringing the enemy into the open as Dr. Gerster would put it.

One other point of technic is well worth mentioning. When you find that you must have more room for deeper work do not open downward as is one's first instinct to do, but upward in a curved direction following the border of the ribs which allows the liver to be rotated upward by traction and brings the region of the common duct much nearer to the surface.

References.

1. Journal of the American Medical Association, April 8, 1911.
2. American Journal of Medical Science, Vol. 135, p. 536.
3. Annals of Surgery, July, 1904.
4. N. Y. Medical Journal, July 1, 1911, p. 11.

Discussion.

Dr. J. Rosenstirn. I would not like to let this very interesting paper pass without discussion and

as you call upon me I will take the liberty of making a few remarks. Whilst I would extirpate every empyematous and every shrunken atrophic gall bladder, I would not do so with every bladder that simply contains gall stones. I believe in drainage of the gall bladder. It disinfects not only the gall bladder, but also the bile ducts and the larger biliary ducts of the liver, and often shows its usefulness in cholangitis. We know that infection ascends from the gall bladder into the liver and we know also that the primary cause of the formation of gallstones is an infection with such germs as colon bacilli, typhoid bacilli, etc. The objection against cholecystostomy on account of the possibility of a re-infection of the gall bladder may also be raised in cases of stones of the large bile ducts. We encounter the same conditions in stone of the hepatic, cystic or common ducts, and I doubt very much that Dr. Allen would advocate their extirpation. We drain the choledochus—we do not extirpate the choledochus, and in the many cases of choledochus stone I have operated I have never seen a bad effect from its drainage, and recoveries without recurrence have been the rule. I do not know what induced Dr. Allen to think that the belief claimed for cases of chronic pancreatitis, by drainage of the gall bladder, would show the pancreatic secretion in seepage from the drained bladder. The underlying idea is that pressure from the dilated bile ducts and liver, upon the pancreatic duct, will be relieved through drainage, and that thereby general improvement of the condition will ensue that will greatly relieve secretory retention in the pancreas, which has caused, or largely contributed to, the pathological condition of pancreatitis. With the relief of pressure the pancreatic fluid again is emptied into the duodenum and normal conditions are restored. We all know that chronic pancreatitis has often been mistaken for carcinoma of the pancreas. The gall bladder has been drained, although believing that the patient would die in a short time from the pancreatic disease, and later it has been found that the pathologic condition has subsided. The gall bladder is drained in such cases with good results.

Therefore, I believe that the pendulum will not swing in the direction of general extirpation of the gall bladder, as recommended in the first instance by its originator, Langenbuch, who advocated in the 80's of the last century the operation of cholecystectomy for every case of gall bladder disease. In cases of empyema of the gall bladder, it should be removed without doubt, but to demand this in every case of cholecystitis is, I think, unjustified, and will not, I believe, be generally accepted by the profession. The method of extirpating the gall bladder by commencing at the fundus is the old method as recommended by Langenbuch and also practiced by Kehrer, and I therefore cannot agree to its original recommendation being claimed for Dr. Lilienthal.

Dr. F. W. Birtch: I am convinced that in a large measure Dr. Allen's report contains the essence of biliary duct surgery as taught today. Gall bladder surgery has undergone many changes in the last few years. Not many years ago it was advocated to suture a tube in the gall bladder and then plaster the gall bladder tightly against the abdominal wall as a routine measure. This method gave way to suturing a tube in the gall bladder and then dropping the viscus back into its normal position. However, neither of these methods, as shown by subsequent case histories, completely relieves the patient. Surgeons all over the world came to realize that these methods were not yielding the desired results. This condition of affairs brought forth a flood of papers recommending cholecystectomy; but before we should recommend the routine removal of gall bladders we must ask ourselves: first, what is the function of the gall bladder? second, what metabolic influence the

removal of this organ has on the individual, and third, what effect it has on digestion. Rost demonstrated that after cholecystectomy the bile first drops continuously into the duodenum but eventually there comes an intermittent emptying just as occurs when the gall bladder is intact. He also emphasized the fact that after cholecystectomy the biliary ducts may become much dilated, and that the stump of the cystic duct may become so large that it functionally serves as a new gall bladder. He explains the dilatation of the ducts on the ground that the sphincter of the papilla is strong enough to hold back the bile until it accumulates sufficiently to stretch the ducts. As far as metabolism is concerned, it is likely that the removal of the gall bladder has no effect on the individual. The loss of the gall bladder in many cases seems to disturb the digestion and this is probably due to the change in the manner in which the bile is emptied into the intestines. As far as the gross lesions of the gall bladder are concerned, such as hydrops of the gall bladder, empyema of the gall bladder, contracted gall bladder, perforated gall bladder, and gangrene of the gall bladder, most surgeons are of the opinion that the viscus should be removed.

Dr. Allen spoke of a small abscess which formed on the liver side of the cystic duct in his case. The cystic duct has very thin walls and perforations are much more common here than through the common duct. However, the cystic duct seldom perforates into the free abdominal cavity, but usually ruptures on the liver side as in Dr. Allen's case.

There are some interesting statistics on the mortality of biliary duct surgery which may not be out of place in this discussion. In simply opening the gall bladder the mortality is almost nil. When the gall bladder is drained in cases where the disease is still confined to the gall the mortality is about 1%. If the cystic duct is involved the mortality is about 2%. When the infection has extended into the common duct the mortality is 8%, varying from 3% in simple cases to 25% in obstructed cases. When malignant disease is present the mortality is as high as 70% or 80%.

The question of cholecystotomy or cholecystectomy is settled when the surgeon is able to recognize the pathology of the gall bladder at the operating table. If a gall bladder will return to normal, then drainage should be the operation of choice. If the gallbladder will not return to normal, then it should be removed. The point is that we must be able to recognize how badly the gall bladder is diseased in order to know how to treat it.

Dr. Allen, closing discussion: I do not want you to think that I remove every gall bladder. In regard to drainage the point wants to be considered that you might not need your drainage if you remove the infected gall bladder; your chief source of infection is gone. Then again, removal of the gall bladder does not prevent you from draining the common duct as long as it seems necessary.

The other point, that the disease is more serious as it progresses down from the gall bladder to the cystic and common duct, applies not to the operation, in my experience, but only to the character of and seriousness of the infection. The only deaths I have had were cases I have drained; like the one mentioned tonight that might have been alive today. Another death after drainage had an accompanying gangrene of the pancreas. Another had suppression of the urine on the second day. In a similar case recently, as to the age of the patient and seriousness of the infection, a cholecystectomy was done under local anesthesia; the woman's urine showed no signs of albumen the day before; slight on the day following; and on the same day, without any warning came down to ten ounces with the alarming signs of coma. If this

patient had been operated upon under ether I'm sure she would have been lost.

Of course, the main thing is the judgment of the surgeon as to the best operation for each case. But I think the argument that it is more serious to do cholecystectomy than cholecystostomy is wrong, especially when you consider the fact that when you remove the infected gall bladder you remove the main source of infection. You will find that both your immediate and your ultimate results will be better.

FISCHER'S THEORY OF EDEMA.

The recent publication of the second edition of Dr. Martin Fischer's work—and the trenchant criticism of Dr. Addis thereon—accentuates my interest in the subject, and if anything, strengthens the opinions I expressed in my review of the first edition written for this JOURNAL (November 1910, page 380).

No one who has repeated experimentally Fischer's work on the behavior of protein colloids can doubt the inevitable absorption and rejection of water under conditions frequently present in living bodies; but when we note the distribution of water in disease, its excessive presence in loose tissues of low specific gravity such as the subdermal, as against organs such as the liver, it seems as though mere weight of what is *assumed to be* protein colloid does not regulate the water absorption in an edematous area. Doubtless various reasons could be adduced in explanation but there is one possibility, which so far as I know has not been brought forward in this discussion which may indeed be the determining factor in this and other pathological conditions, namely, that the living protoplasm may be neither chemically protein or physically colloid. It is to be remembered that we know practically nothing of the static chemistry of life; all experimentation means chemical change and the appearance of non-living substance (Paraplastin). It is quite impossible to determine whether reactions so occurring are the product of the newly formed paraplastin or associated living protoplasm. Reactions whereby we determine that a given substance is a protein cannot be applied to the contents of a living cell and if they could, and positive reactions followed, we still would be unable to state that it was the living protoplasm and not the associated paraplastin that was reacting. This fact is implicit in Adami's designation of protoplasm as "proteidogenous matter." We must look on every living tissue, and cell, as made of protoplasm, and formed matter (ground substance in histology, paraplastin cytologically). On the occurrence of death the former becomes the latter and does so progressively in the act of dying.

I wish now to submit the thesis that the principles involved in Dr. Martin Fischer's theory probably apply only to the formed matter of cells and tissues. As all living tissues contain an abundance of such formed matter, in very varying amounts according to location and condition, we would still have abundant scope for these colloidal activities, without expecting them to be uniform in their incidence. It would explain why cellular tissues with the preponderance of ground substance are more prone to edema than muscles; why the

lung is more affected than the liver; also why dying organs and cells with protoplasm passing into paraplastin increasingly absorb water.

While I advance this contention on theoretical grounds, I believe the problem is open to experimental proof, by direct observation of the behavior of living cells and tissues containing varying proportions of protoplasm and ground substance, when submitted to the influences inducing water absorption or rejection. Such work would be arduous, but almost certainly fruitful. I trust that some of my colleagues with more time and facilities for cytological research may undertake it, and I would gladly co-operate to the extent of my time and ability.

H. D'ARCY POWER.

PAN-AMERICAN MEDICAL CONGRESS.

Pursuant to an invitation by the President of the United States, authorized by act of Congress approved the third of March, 1915, the Seventh Pan-American Medical Congress convened in San Francisco on the seventeenth of June of this year. Owing to the short time between the authorization of the medical congress by the national Congress, a smaller attendance than was desired was realized, but in spite of the short time Argentina, Brazil, Cuba, Guatemala, Panama, Peru, Salvador and Venezuela were ably represented by delegates in person, and not a few who could not attend contributed to the support of the meeting by dues and by writing and submitting papers. The object of this special congress is, succinctly: (1) To promote personal and fraternal relations between the members of the medical profession of the Western Hemisphere; (2) To make the medical profession of each country more familiar with the educational, scientific and other medical resources of all the other American countries; (3) To consider problems of sanitation and public health administration of both national and international importance to the countries and colonies concerned; (4) To promote the development of periodical and other medical literature best calculated to promote the interchange of thought, as well as practical scientific co-operation by and between an All-American Medical Profession; (5) To cultivate the medical sciences.

In all of these the present meeting carried matters a certain distance forward. Certainly those Anglo-Americans who became well acquainted with Demaria of Argentina, Ramos and Roche Vaz of Brazil, Arteaga and Pons and Placeres of Cuba, Morales of Peru, Leiva of Salvador, Risquez of Venezuela, as well as those representatives of Guatemala who now, during the Exposition, are residents of San Francisco, feel that they have gained personal friends and have learned much of the status of medical education and of the hospital situations in the countries represented. The major proposition of the congress is, of course, the adequate consideration of national and international health problems, and in this the gain lay in the proceedings of the Section on Preventive Medicine and Public Health, under the Chair-

manship of Senior Surgeon C. C. Pierce, of the United States Public Health Service. The papers presented and the discussions on them were in all respects satisfactory, and fully compensated for the smaller showing of the International Consular Symposium on "The Relation of the Consular Services to Pan-American Health Problems," which had been arranged for, but for which there was not, confessedly, adequate time for preparation.

The Section on General Medicine, under the Chairmanship of Dr. John L. Dawson of Charleston, S. C., and the Vice Chairmanship of Dr. Philip King Brown of San Francisco, had a very full programme of titles, mostly by Latin-Americans who were not present; but two good sessions were held. Surgery, which included Orthopedics, Urology, and Military Surgery, under the Chairmanship of Dr. Wallace I. Terry, had a full program, which was well carried out. In the absence of their regularly appointed Chairmen, the Section on Laryngology, Rhinology, Ophthalmology and Otology was presided over by Dr. Kaspar Pischel of San Francisco, and that on Obstetrics and Gynecology by Dr. S. H. Buteau of Oakland. In the Section on Anatomy, Physiology, Bacteriology and Pathology, with Dr. Martin H. Fischer of Cincinnati, Chairman, there were but three English papers, out of a total of eighteen presented—fifteen being in Spanish or Portuguese.

The Address of the President, Dr. Charles A. L. Reed, of Cincinnati, on "The Relation of the Medical Profession to the Practical Pan-Americanism of the Twentieth Century," was a notable paper, of value as a state document because of its breadth and depth of vision, its prescience, and its classical form. It was presented at an evening session, to which the foreign delegates were welcomed by an address in Spanish by Dr. D. W. Montgomery of San Francisco.

Following the adjournment of the American Medical Association, at which meeting the special delegates and other attendants of the Pan-American Medical Congress were guests, the foreign congressors and the officers of the congress were sent on a journey on which the foreign delegates were the guests of, and the officers were the hosts for, the State Department. This journey was under the charge of Dr. H. L. E. Johnson, of Washington, the special representative of the State Department; it was made in special cars and diners, and extended from San Francisco to San Diego, the Grand Canyon of the Colorado, the Yosemite Valley, with stops at Del Monte, Santa Barbara, Los Angeles and Wawona and back to San Francisco. At Wawona the Latin Americans became the hosts for an evening and celebrated the 4th of July, the first of the birthdays of republicanism in the Western Hemisphere. The whole journey was admirably planned and perfectly managed and contributed more than anything to the development of friendly relations and knowledge of each other between the visitors and the hosts.

The first of these congresses was held in Washington in 1893, under the Presidency of the late Dr. William Pepper. Since this, others have been

held in Mexico, Cuba, Panama, Guatemala and Peru. The return to the United States for the seventh was most appropriately under the Presidency of Dr. Charles A. L. Reed, for he had been the original suggestor of the movement. Argentina, it is hoped, will issue the call for the eighth, which should be held in 1918.

That this particular congress has a peculiar duty to the peoples of North and South America is obvious; that this duty can be discharged by none others than members of the medical profession is manifest; that medicine will not fail can be predicted, for it never has failed, and is less likely to do so now than ever before. "The noblest study of mankind is man," and the greatest duty is "the care and nurture of men," and this in effect is the function of medicine for the State, for the Home, and for the Generations.

NOTICE

To the California State Journal of Medicine:

Greetings from the Spanish-American War Nurses and a cordial invitation to its members to attend the reception held in San Francisco on August 12, "Spanish-American War Nurses Day" at the P.-P. I. E.

The afternoon reception is to be held in the California Building, Exposition Grounds, from 2 to 5 p. m., and is tendered the members of the S. A. W. N. and their friends by the Woman's Board of the Directors of the Exposition.

The evening reception at Hotel Sutter from 8:30 to 11:30 is given by the S. A. W. N. to their friends and all members of the medical profession and members of the various military and patriotic societies, and especially to those surgeons and physicians who saw service during the Spanish-American war.

BOOK REVIEWS

The Chemical Examination of Water, Sewage and Foods. By G. S. Graham-Smith, M. D., and J. E. Purvis, M. A. Cambridge at the University Press, 1914. 9/- net.

This volume is one of a series dealing with subjects of interest to those connected with Public Health Departments and the Medical Profession in General.

Being comprehensive, it is of a necessity, brief, yet its scope will appeal to other workers in chemistry who are interested in the subjects considered.

The thirteen chapters on the subjects of: Water, Sewage, Milk, Cream, Condensed Milk, Butter, Edible Fats and Oils, Cheese, Tea, Coffee, Cocoon, Chicory, Flour, Bread, Starches, Pepper and Other Spices, Sugar and Sugar Products, Alcoholic Beverages, Liquors, Vinegar, Fruit Juices, Poisonous Metals in Foods, Preservatives, Air, Gases, and Urine.

A bibliography follows each subject. Typical analyses are given of various foods, which are valuable to the chemist, particularly so where they are, as in this instance, authoritative. It contains much data and methods of value to the analyst. The methods of analysis are those used in Great Britain and the Continent, so that many could not be used by the American food chemist. The methods of analysis on sugar are particu-

larly open to criticism for the use of a practical food analyst.

The book is clearly printed and the subject matter can be readily understood by those who are not deeply versed in chemical processes.

It is of service to the student, teacher and doctor, and would find a welcome place in the library of any food chemist. E. C. N.

General Surgery. Practical Medicine Series, Vol. II. Edited by John B. Murphy. Series of 1915. Yearbook Publishing Co., Chicago. 1915.

While, as might be anticipated, this volume is strongly marked with the personality of the editor, it has the quality of containing all of the most vital and practical material on surgical subjects that appears in the current medical literature. There is a very gratifying decision and emphasis employed in the exposition of the material that serves well to arrest the casual reader's attention or to impress the one who seeks information as in a reference work. The chapters on operative technic, bone grafting and appendicitis are particularly well worth reading. G. H. T.

A Text-Book of Diseases of the Nose and Throat.

By D. Braden Kyle, A. M., M. D., Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia. Fifth edition, thoroughly revised and enlarged. Octavo of 856 pages with 272 illustrations, 27 of them in colors. Philadelphia and London. W. B. Saunders Company, 1914. Cloth, \$4.50 net.

This work has attempted to discuss diseases of the nose and throat from the pathological standpoint and with a large measure of success. Pathology is the basis of any intelligent understanding or treatment of disease, and Dr. Kyle is to be congratulated in that he has brought this feature so prominently to the front in his book. It will not militate against the usefulness of the work that there are some points that might be improved on. As an instance of this may be cited the great amount of space taken up with operations on the septum, most of which have been discarded. However, it is probably too much to expect of an author that he should omit all archaic material otherwise we should have pamphlets instead of books. It is a sound and safe book to give to students and ought to encourage them to a good understanding of pathology, which I take it, is its chief aim. H. Y. McN.

Essentials of Laboratory Diagnosis—Designed for

Students and Practitioners. By Francis Ashley Faught, M.D., Director of the Laboratory of the Department of Clinical Medicine and Assistant to the Professor of Clinical Medicine, Medico-Chirurgical College, etc., etc., Philadelphia, Pa. Pp. 450 containing 10 full-page plates (4 in color) and 58 text engravings. Fifth Revised Edition. Price, \$2.50 net. 1915. F. A. Davis Company, Publishers, Philadelphia. English Depot, Stanley Philips, London.

This volume contains a brief description of the routine tests employed in the clinical laboratory. It should prove especially valuable both to students and to those physicians who wish to acquaint themselves with a good working method for carrying out the commoner laboratory reactions. The more modern and reliable tests are described while the elimination of much of the complex matter

found in larger works makes the book concise without the loss of any of the essentials.

It is to be highly recommended as a compact but not too brief outline of every-day laboratory methods. C. S.

Infant Feeding, Its Principles and Practice. By F. L. Wachenheim, M. D., Attending Physician Sydenham Hospital and Mount Sinai Dispensary, New York City. 12mo, 340 pages. Cloth, \$2.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

This is a review of the several methods of infant feeding and a consideration of a few disorders associated with nutrition. The work is commendable as well for its brevity as for the definite information it contains. It could have been made still shorter without detracting from its merit. The keynote of the book is found on page 242, where the author comments on the "superiority of bedside observation over uncontrolled laboratory research and mere reverence for authority," and again on page 184 where in discussing the various systems of feeding he states that "The confusion referred to gives an accurate picture of the present situation: a system of artificial feeding that really meets the requirements is still awaiting discovery." Wachenheim handles the various feeding systems with authority. He points out their strong and their weak points. He almost states a principle when he says (pages 46-47), "The idea that different metabolic and nutritional results can be obtained from a definite caloric food-estimation has been and will probably remain chimerical." The tables he furnishes for practical use—such as the quantitative table (page 19) are admirable. His discussion of digestive disorders, the disorders of metabolism, rickets and scurvy are good. The book is written in a scholarly manner. It can be read with profit and should be appreciated by the practicing physician. SANFORD BLUM.

Pathological Technique: A Practical Manual for Workers in Pathological Histology and Bacteriology, including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By F. B. Mallory, A. M., M. D., and J. H. Wright, A. M., M. D., S. D. Sixth Edition, Revised and Enlarged with 174 Illustrations. Published by W. B. Saunders Co., Philadelphia and London, 1915.

No comment need be made upon the text and illustrations of the previous editions of "Pathological Technique," since its acceptance years ago as a standard work on autopsy technique and histological tissue preparation. In the sixth edition the authors have incorporated in the original text some sections on bacteriology and serology descriptive of the bacillus of pertussis, Blastomyces and Sporothrix schenckii; complement fixation in gonococcal infection and echinococcal cyst, and Lange's colloidal gold reaction in cerebrospinal fluid for syphilis of the central nervous system. Several additions to histological technique have been made, viz., Eyenes' and Sternberg's silver impregnation tissue method for staining the Treponema pallidum; Bielschowsky's silver impregnation stain for nerve fibres, connective tissue fibrils and reticulum; Bensley's stain for mitochondria; Herxheimer's alcohol-acetone solution of Scharlach R stain for fat. The staining methods are new and have been found valuable to the histologist. In the earlier editions no attempt was made to pub-

lish an exhaustive work and this edition evinces the wishes of the authors in publishing those histological methods which have been thoroughly tried out and found to be of material assistance to the laboratory worker, rather than in publishing an exhaustive treatise in which it is more difficult to choose the best. This book should have a place in every laboratory.

W. T. C.

A Practical Text-Book of Infection, Immunity and Specific Therapy, with special reference to immunologic technic. By John A. Kolmer, M. D., Dr. P. H., Instructor of Experimental Pathology, University of Pennsylvania, with an introduction by Allen J. Smith, M. D., Professor of Pathology, University of Pennsylvania. Octavo of 899 pages with 143 original illustrations, 43 in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$6.00 net. Half morocco, \$7.50 net.

The world wide, searching studies of the past ten years on the subjects of the title of this work, are creating a new era in medicine, both preventive and curative, and unless the practitioner as well as the public health man keep very wide awake, they will find themselves left behind with theories and methods that belong to the yesterdays.

This work by Dr. Kolmer of Philadelphia will, for a period, be indispensable in the laboratory because of its accessible and clear information on the methods followed in to-day serum work; it should be in the hands of every man who is not thoroughly familiar with the theories underlying all serum work, or the methods of preparing his immunizing and curative sera.

It will in all probability be recommended by teachers to their students because of the great care taken in the presentation of the subjects and the inclusion of a course in experimental infection and immunity.

The work is well illustrated, all important reactions, whether in vitro or in vivo, being shown in colors.

G. M. C.

Ten Sex Talks to Girls 14 Years and Older. By J. D. Steinhardt, M. D. 193 pages. 12 mo. Illustrated. J. B. Lippincott Co., Philadelphia and London, Publishers. Price, \$1.00.

In last year's number of this Journal (Oct., 1914, p. 431) we reviewed a similar book of the same author, viz., "Ten Sex Talks for Boys." The present lectures are for the information of girls, and dedicated to "our grandmothers, our mothers, our wives, our sisters and our daughters, in the hope that all of them will find both profit and pleasure in the knowledge its pages impart."

The book also contains a very sensible commendatory introduction by Rachelle S. Yarros, M. D., chairman of Social Hygiene of General Federation of Women's Clubs.

The first lecture occupies itself with the anatomy of the external and internal sexual organs.

The second talks of the physiology of menstruation and gives the three more common causes for its disturbance—constipation, retention of urine and tight lacing.

The third treats of hemorrhoids and their causes, the evil effects of constipation and measures for regular evacuation of the bowels; also of the effects of undue retention of urine upon the bladder.

Leucorrhea forms the next part and the observance of cleanliness during the menstrual period.

After a condemnation of the general run of corsets, masturbation is finally discussed with all the usual recount of evils due to its practice and advice given by the author how to avoid the rousing of sexual desire.

The fourth and fifth chapters tell of venereal diseases, their ravages among those afflicted with

them and their disastrous influence upon the offspring. The latter is illustrated by some very gruesome pictures.

The author proposes, as the best means of protection against the invasion of venereal diseases into the household, a strict demand for purity and continence of those men to whom the privilege of an acquaintance with the young ladies, and entrée to their families is granted, but fails to indicate the manner of ascertaining the concession of such demands.

In the sixth chapter the beneficial influence of the mingling of the sexes for both is accentuated; indiscriminate kissing is adjudged to be leading to immorality, and a warning is issued against immodest actions and forms of dress, as well as drinking.

Marriage, the favorite topic of the sex, is fully discussed in the seventh chapter. The essentials to a happy marriage are presented to the reader, the advantages and dangers of early marriages are carefully balanced, and the qualities a girl should look for in the man of her choice fully explained. The duties of wifedom however are not forgotten, and the prospective bride is admonished not to neglect her part in making the matrimonial venture a success.

Motherhood in its expectancy and its fulfilment are the subjects of the eighth chapter, and rational measures are recommended for the sanitary needs involved.

Regulations for the management of the child from its birth are given in the ninth and tenth chapters. They are reasonably complete but the author omitted to call special attention to the importance also of prenatal care. A brief mention of the menopause, its meaning and importance as well as some precautions necessary during its course, closes the talks.

The book may well be recommended as a sane and safe counselor for mothers to help them shape their advisory instructions to their daughters and have them read it when they enter the sexual phase of their lives.

J. R.

The Gynecology of Obstetrics. An Exposition of the Pathology Bearing Directly on Parturition. Published by the Macmillan Co., New York, 1915.

A very interesting, instructive book! and a novelty: We are used to speak of obstetrics and gynecology—but here the interdependence of the one from the other is denoted and emphasized through the very title of the book.

The book treats the whole field of injuries brought about by the act of delivery. In the first chapter, Anatomy of the Cervix and Perineum, a clear description of the structures is given, based upon original dissections with very instructive microscopic illustrations; the (colored) macroscopic reproductions are unfortunately small, but they have the advantage of being reproductions of nature and not schematic drawings. It would be such a material aid to study if the plates could be enlarged in the next edition of the book.

In Mechanics of the Relaxed Outlet this somewhat complex topic is admirably handled.

In Etiology and Prevention of Lacerations, sensible views are expressed; the author though, should have insisted that wherever great probability of a real cervical tear exists (forceps delivery, where the undilated ring is carried down; version and extraction) an inspection of the cervix should always be made. In the chapter on Pathology of the Cervix possibly too great importance is given to mechanical influences as producing pathologic

changes; the reproductions of microscopic findings are very instructive.

In Symptoms of Cervical Pathology; Treatment of Cervical Pathology; Curettage, extremely sound, conservative views are expressed.

In Immediate Repairs one fails to find recommendation of a retractor to diagnose the extent of a perineal laceration; if a retractor is used there is no difficulty to determine their extensiveness. The discussion on immediate repair is a trifle narrow; this in striking contrast with the excellent, broad treatment of perineorrhaphy. "Tears" are so common in the delivery of a woman, the methods of immediate suture are so multiple; but the surgical necessity common to all of them is a good sweeping grasp of the sides of the wound and avoidance of all dead spaces in the wound.

In Symptoms and Diagnosis of the Relaxed Vaginal Outlet excellent advice is given for physical examination and discovery of defects. The variation of complaints, their uncertain character is properly exposed; but the theory of reflex action, such as eye strain, melancholia, hysteria "by no means uncommon" and "almost any type of nervous phenomena" as due to relaxation of pelvic outlet cannot be accepted.

The chapters on Perineorrhaphy and Cystocele deserves a special careful reading. A broad general exposition of the underlying principles is given; the fundamental work of Tait, Emmet and Hegar is described and it is left to every operator to work out his method; no detailed descriptions of any method is made, this is left to the regular textbooks; the modern technic of denudation or rather dissection and the necessity of union of muscle and fascia is clearly shown.

In the chapters on Post-operative Treatment, Prognosis and Post-operative Complication and Miscarriage and Sterility, sane modern ideas are expounded, recommending freedom of motion and absence of harmful polypragmasie. One misses the application of a codein suppository, such a relief! And the recommendation of exercise after Thure Brand.

In Bladder Infections many a fine observation is made and with Kidney Ptosis an extremely interesting study is added.

The book shows everywhere the author's sound judgment of an experienced obstetrician and gynecologist; his skill with the dissecting scalpel and the microscope; his comprehensive knowledge of literature, even if his citations are inclined to favor home products.

The author is a member of the California profession and this book is a credit to the profession of the Golden State.

H. J. K.

SOCIETY REPORTS

LOS ANGELES COUNTY.

Meeting of the Eye and Ear Section of the Los Angeles County Medical Association was held at the office of Dr. J. J. Kyle, 702 Title & Trust Bldg., May 3, 1915.

Attendance.

Drs. J. M. Brown, Dudley, Hastings, Harris, Lund, McCauley, G. W.; Miller, R. W.; Montgomery, Roberts, Stivers, Sweet, Detling, Reynolds, Graham, Kyle, Griffith, Leffler and Kress.

Visitor: Dr. Swetnam.

Dr. Stivers read his paper entitled "The Modern Treatment of Stammering and Lipping," illustrated by two cases; one of which, a girl of 12, had been considered feeble-minded up to the time of making the diagnosis of speech defect, when she was put under regular treatment and has since made remarkable progress both in speech and in school standing.

The second case was one of lipping in a child

of 10, which has fully recovered. The girl recited a stanza of Longfellow's poem "The Village Blacksmith."

Discussion was by Drs. Sweet, Montgomery, Roberts, Hastings and R. W. Miller.

On report of roll call the following reported cases:

Dr. Dudley—Kerato-conus in a girl.

Dr. Harris—Case of child showing ability to turn the left eyeball either inward or outward. Vision in the left eye is 6/9 with glasses. The correction is $\frac{1}{2}$ Diopter Hyper-astigmatism axis 90.

Second case Albuminuric Retinitis—a perfect picture of the fundus in this condition. Man, carpenter, was obliged to quit work. His vision is 6/12 minus—with glasses 6/9, he has lost 1 diopter in vision. The urine is full of albumen and casts.

Dr. Geo. W. McCoy voiced a word of protest against too early operation in squint in children.

Dr. Dudley said that it makes a difference what the condition of the child is in regard to the squint. If the faculty of vision is not lost after operation there will be no deviation. The amount of vision is of great importance. In the very young, in making the diagnosis, he recognizes the use of white balls rolled in front of the patient.

Dr. G. W. McCoy reported a case of unusual interest in a man showing bulging eyeball, temperature and leuco cystosis. There was paralysis of the 3d, 4th, 5th and 6th nerves. No headaches, no specific history, and the eye showed a picture of pan-ophthalmitis. Dr. Kyle suggested it might be due to internal brain condition. Dr. Hastings was of the opinion it was a lesion further back in the brain on account of the involvement of the 5th nerve.

Dr. Leffler reported a case of neuro retinitis with detachment of retina, and exhibited the patient.

C. G. STIVERS, Secretary.

Regular meeting of the Eye and Ear Section of the Los Angeles County Medical Association was held in the offices of Dr. G. J. Lund, Auditorium Building, June 7, 1915. Those present were:

Drs. F. D. Bullard, J. M. Brown, Dudley, Dilworth, Fleming, Hastings, Kiefer, Kelsey, Lund, G. W. McCoy, Roberts, Reed, Stivers, Sweet, Stephenson, True, Detling, Reynolds, Kyle, Griffith, Leffler, Kress, and Old.

Visitors: Drs. Swetnam and Walker.

Minutes of previous meeting read and approved.

Dr. H. M. Griffith read his paper entitled "Important Steps in the Operation for the Correction of Septal Deformities and Methods Used in Overcoming Difficulties Encountered in 130 Sub-Mucous Resections." Dr. Griffith showed numerous pieces of bone removed in these operations.

Discussion was by Drs. Kyle and Stivers, Fleming, Detling and McCoy.

Dr. Stephenson showed a case of a boy who had been operated for removal of tonsils and adenoid, and cautery of turbinals, and still presented a blocked nose.

Dr. Stivers exhibited four cases—two of sub-mucous resection, one of congenital absence of auditory canal, and one of a case of acute swelling in the thyroid region, painful to pressure, history of having come since May 24. There is no tonsil or adenoid infection.

Dr. Kress presented a resolution to amend the By-Laws in regard to the method of election of members. On motion, it was ordered to be brought up for discussion at the next regular meeting.

C. G. STIVERS, Secretary.

ORANGE COUNTY.

At a good attendance of the members of the Orange County Medical Association Dr. Walter V. Brem presented an interesting and very instructive paper, "Vaccine and Serum Therapy," at our regular July meeting. After a general discussion the members partook of a light lunch.

R. A. CUSHMAN, Secretary.

PLACER COUNTY.

The regular meeting of the Placer County Medical Society was held Saturday evening, June 12, at the Auburn Sanatorium, East Auburn. The following members and visitors were present: Drs. H. T. Rooney, R. F. Rooney, Allen, McCullough, Mackay, Fay, Couture, Miner, James, Force and Peers.

The election of Drs. Wm. F. Jordon, Floriston; E. E. Ostrom, Loomis, and Henry N. Miner, Colfax, to membership in the Society, was confirmed by vote.

Drs. H. T. Rooney, Fay, Mackay, Allen and Peers were appointed a "Committee on Red Cross Work."

Dr. Mackay presented a patient 87 years of age upon whom he had operated successfully on May 30 because of acute appendicitis.

Drs. Rooney, Fay and Allen reported interesting and unusual cases recently under their care.

Dr. J. W. James, Sacramento, read a paper entitled "Perineal Repair." Discussed by Drs. Fay, Mackay, R. F. Rooney, Couture, McCullough, Force, Miner, Allen, H. T. Rooney and R. F. Rooney.

Dr. John N. Force, University of California, then presented a paper, "The How and Why of Vaccination," accompanied by photographs and exhibits. Discussed by all members present.

After adjournment the members partook of a banquet furnished by the Superintendent and Nurses of the Sanatorium.

The Placer County Medical Society will hold meetings every month until the bad weather of winter makes traveling difficult in that section of the state. At the July meeting Dr. Ebright of San Francisco and Dr. Gundrum of Sacramento were scheduled to present papers. As the meetings occur so late in the month it is not possible to get the reports of the meetings in the issue of the Journal immediately following each meeting.

It is announced, however, that the August meeting will have two very fine surgical papers, and it is hoped that it will have a large attendance.

ROBERT A. PEERS, Secretary.

SACRAMENTO COUNTY.

Regular meeting, June 15th, at the Hotel Sacramento, at 8:30 p. m. President J. B. Harris presiding.

Subject of the meeting was Tuberculosis. Various phases of the problem of tuberculosis were taken up by the different members of the society in the form of a symposium. Each speaker was allowed 15 minutes.

First paper was "Early Diagnosis in Pulmonary Tuberculosis," by R. A. Peers, M. D., of Colfax.

Second paper, "Climatology in the Treatment of Tuberculosis," by B. F. Howard, M. D., of Sacramento.

Third paper, "Tuberculosis of the Female Genitalia," by J. W. James, M. D., of Sacramento.

Fourth paper, "The Relation of Certain Urinary Findings to Prognosis in Pulmonary Tuberculosis," by J. C. Cummings, M. D., of Sacramento.

On account of illness Dr. Cummings was unable to read his paper, which was presented to the society by the secretary.

The discussion was opened by Dr. Williamson,

City Health Officer, subject, "Relation of Housing Conditions in Sacramento to Certain Phases of the Local Tuberculosis Problem."

The application of Dr. Blake Franklin of Jackson, Amador County, was read.

Adjourned at 11 p. m.

F. F. GUNDRUM, M. D.,
Secretary-Treasurer.

SAN JOAQUIN COUNTY.

The regular monthly meeting of the San Joaquin County Medical Society was held Friday evening, May 28th, at the office of Dr. C. F. English. Those present were: Drs. R. T. McGurk, J. T. Davison, L. Dozier, G. W. Walker, E. A. Arthur, W. W. Fitzgerald, F. P. Clark, Minerva Goodman, J. D. Dameron, Mary Taylor, C. R. Harry, C. F. English, H. J. Bolinger, W. F. Priestly, J. V. Craviotto, S. P. Tuggle and Dewey R. Powell, with Dr. H. E. Ruggles, of San Francisco, as guest.

The program committee stated that they were endeavoring to secure some distinguished eastern visitor for our June meeting, which comes at the close of the A. M. A. meeting in San Francisco.

The discussion of the evening was given by Dr. Ruggles of San Francisco on "X-Ray Diagnosis," illustrated by many interesting and instructive plates, particularly gastro intestinal and chest plates. After general discussion, a social hour was enjoyed.

DEWEY R. POWELL, Secretary.

SOLANO COUNTY.

On May 10, 1915, the Solano County Medical Society met and elected to membership Dr. Francis Stolle by transfer from Marin County.

The following officers were elected for the ensuing year: President, Dr. E. A. Peterson; vice-president, Dr. Jas. Brownlie; secretary-treasurer, Dr. Paul H. Reilly; delegate, Dr. B. J. Klotz; alternate, Dr. Ream S. Leachman.

PAUL H. REILLY, Secretary.

DEPARTMENT OF PHARMACY AND CHEMISTRY.

Edited by FRED I. LACKENBACH.

Since publication of New and Nonofficial Remedies, 1915, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

Cephaeline.—An alkaloid obtained from ipecac. It is relatively more emetic and less nauseant than ipecac and causes more renal irritation and less cardiac depression. It may be used as an emetic and expectorant. It is insoluble in water, but forms water soluble salts.

Syrup Cephaeline, Lilly.—A non-proprietary preparation containing cephaeline hydrochloride, equivalent to 2/5 grain cephaeline per fluidounce. Eli Lilly Co., Indianapolis, Ind. (Jour. A. M. A., June 19, 1915, p. 20667).

Ouabain Ampules, H. W. & Co.—Each ampule contains 0.5 mg. crystallized ouabain. Hynson, Westcott & Co., Baltimore, Md. (Jour. A. M. A., June 19, 1915, p. 2067).

Items of Interest.

Typhoid Vaccine.—Extensive clinical trial indicates that typhoid vaccine may influence the course of the disease favorably. The results indicate that

if used with discretion, typhoid vaccines do no harm (Jour. A. M. A., June 26, 1915, p. 2139).

Rheumalgine.—Rheumalgine (Eli Lilly & Co., Indianapolis) is put up both in tablet form and as a liquid. Each tablet, or teaspoonful of the liquid, is said to contain: "Strontium salicylate from Natural Oil 5 gr., Hexamethylenamin 2 gr., Colchicine 1/200 gr." The Council on Pharmacy and Chemistry found Rheumalgine in conflict with its rules in that unwarranted therapeutic claims were made because the combination is conducive to uncritical prescribing and because the name, being non-descriptive of its composition, encourages thoughtless use (Jour. A. M. A., June 26, 1915, p. 2156).

Intravenous Radium Solution.—Standard Radium Solution for intravenous use (Radium Chemical Co., Pittsburgh) is sold in ampules, each containing radium bromide equivalent to 0.05 mgm. radium element and 0.0002 Gm. or less of barium bromide dissolved in 2 Cc. sterile normal salt solution. While the Council on Pharmacy and Chemistry confirmed the claimed composition of this solution so far as concerns the radium content, it refused recognition to the preparation because there is no clear evidence that intravenous injection has any advantage over the other methods of administering radium. The Council holds that on the basis of our present knowledge radium should be used intravenously only by those in a position to study its effects carefully and in an institution equipped with the necessary facilities for such study (Jour. A. M. A., June 26, 1915, p. 213).

Venodine.—Venodine (The Intravenous Products Co., Denver) was stated to be "an Intravenous Iodine Compound" put up in ampules, each of which contains "28 grains of Sodium Iodide, 1/8 grain each of Beechwood Creosote and Guaiacol in a suitable vehicle, and excipients to enhance its compatibility with the circulating blood." The "Therapeutic Indications" were said to include "infectious diseases, such as syphilis, tuberculosis, bronchitis, bacteraemias associated with chronic and acute nephritic (Bright's disease), and other infections." The Council on Pharmacy and Chemistry found Venodine ineligible for New and Non-official Remedies because it was exploited under unwarranted and grossly exaggerated therapeutic claims; because neither the name nor the advertising matter indicated that it was a preparation of the well-known sodium iodide; and because the combination of two such similar substances as creosote and guaiacol is unscientific, adding mystery to the preparation without increasing its efficiency (Jour. A. M. A., June 26, 1915, p. 2155).

Calcreose.—Calcreose (Maltbie Chemical Co., Newark, N. J.) contains in loose combination approximately equal weights of creosote and lime. The advertising claims having been revised, the Council on Pharmacy and Chemistry postponed definite action pending submission of proof (1) that the large doses of Calcreose recommended furnish large amounts of creosote to the blood, and (2) that patients taking these large doses do not suffer from digestive disturbances, loss of nutrition, albumin in the urine or phenol urine as claimed. At the same time it was emphasized that this action did not indicate a belief on the part of the Council that enormous doses of creosote are necessary or beneficial in tuberculosis. So far, the Maltbie Chemical Co. has not submitted the required evidence. As the Council's postponement of a report has been made to appear as a quasi-approval, the Council voted to announce that Calcreose had been refused recognition because the therapeutic claims were exaggerated and unwarranted by the evidence (Jour. A. M. A., June 26, 1915, p. 2155).

Iodex.—Iodex (Menley & James, Ltd., New York) is said to contain 5 per cent. of iodine; the advertising suggests that the effects of free iodine

are to be obtained from the preparation, which yet is said not to stain the skin. It is also claimed that thirty minutes after inunction iodine can be found in the urine. The chemists of the A. M. A. Chemical Laboratory on examination found that Iodex contained only about half the claimed amount of iodine, that the iodine did not behave as free iodine and that after inunction of Iodex, iodine could not be found in the urine. Because of these findings and because of the unwarranted therapeutic claims made for the preparation, the Council on Pharmacy and Chemistry held Iodex ineligible for New and Nonofficial Remedies (Jour. A. M. A., June 19, 1915, p. 2085).

Lepso.—The A. M. A. Chemical Laboratory found this to contain bromides, equivalent to 51 grains potassium bromide per dose of one-half ounce (Jour. A. M. A., June 12, 1915, p. 2006).

Herbetta Curine.—A package of Herbetta Curine contained three envelopes, labeled 1, 2 and 3, respectively, and in addition a number of red tablets. The A. M. A. Chemical Laboratory found that No. 1 consisted of tablets which contained soluble iron phosphate; No. 2, of tablets which contained some "bitter tonic," and No. 3, of tablets responding to tests for aloes and aloin. The red tablets were composed essentially of strontium and potassium bromide (Jour. A. M. A., June 12, 1915, p. 2006).

E-Lep-Tine.—E-Lep-Tine is an "epilepsy cure." According to the Indiana State Board of Health, it contained sodium and potassium bromides 16 per cent., alcohol and ammonium valerate (Jour. A. M. A., June 12, 1915, p. 2006).

Tanlac.—Tanlac (The Cooper Medicine Co., Dayton, O.) is a "tonic and system purifier" and is exploited to the public by means of extravagant and absurd claims. From an examination made in the A. M. A. Chemical Laboratory it appears that Tanlac is essentially a venous extract which contains 15.7 per cent. absolute alcohol by volume, a bitter drug (such as gentian), an emodin-bearing drug (such as buckthorn, rhubarb or cascara), a berberine-bearing drug devoid of hydrastine (such as berberis aquifolium), glycyrrhizic acid (from licorice), and flavored with wild cherry and to which has been added a relatively large proportion of glycerin. The "Tanlac Laxative Tablets" which accompany Tanlac contained phenolphthalein (Jour. A. M. A., June 5, 1915, p. 1930).

CALIFORNIA SOCIAL HYGIENE SOCIETY.

To City and County Health Officers of the State of California:

Enclosed are copies of two lavatory signs prepared by the California Social Hygiene Society and approved by the San Francisco and State Boards of Health. These signs are neatly framed in hardwood and covered with glass to prevent mutilation. Having them framed as we do, in large quantities, we get an unusually low price—glass and hardwood frame complete for 17 cents each, soft wood, 12 cents each.

Many of the signs approved by the San Francisco Board of Health have been put up in men's lavatories in saloons, billiard parlors, and hotels, as well as in all the lavatories at the Exposition. The Southern Pacific Company is placing one of the state signs in each of the men's lavatories on the Pacific Coast Division, including passenger coaches, ferry boats and stations.

We are getting many excellent results through our Advisory Department from these signs. This is a most effective means of driving the quack out of business and of keeping men from using injurious patent remedies. So far, there has been

no criticism, but a great deal of commendation for this work. Men who cannot afford to pay for treatment, and there are many such, are referred to the genito-urinary clinics of the five teaching institutions of the city.

Will it not be possible for you to adopt one or the other of these notices? The part of the sign providing for free sex advice and the handling of correspondence could be changed to suit local conditions. The literature mentioned on the San Francisco sign (of which we are sending you a set under separate cover), could be furnished you by us without charge. I should be very glad to handle the framing for you, should you find that it was impossible for you to get a cheaper price than the one quoted above. You understand, of course, that this is not a commercial proposition with us, but that, as a society, we are working for the prevention of venereal diseases and the promotion of public health.

I can assure you that we will appreciate the opportunity of co-operating with you.

Yours very truly,

CLYDE N. WHITE,
Executive Secretary.

PUBLISHED BY ORDER OF THE BOARD OF HEALTH.

Venereal Diseases.

Gonorrhoea (or Clap) Causes:

1. About 25 per cent. of all blindness in the United States.
2. Many childless marriages.
3. Many innocent wives to become invalids for life.
4. At least 50 per cent. of all surgical operations upon the female organs.
5. Gonorrhoea is often not cured when it seems to be cured. The germs of gonorrhoea often remain hidden in the body ready to cause serious trouble later, after the symptoms of the disease have been stopped by treatment. Often the disease is completely cured, but very frequently it hides in the body and then breaks out again of itself after months, or even years. It may then be given ignorantly to an innocent wife, may cause her untold suffering, may make her an invalid all her life, and may cause a child to be born blind.

Syphilis (or Pox) is a blood disease which may be transmitted to wives and children, if not cured, and is liable to cause insanity, locomotor ataxia or total paralysis. Syphilis can be cured.

Prevention.

(a) The only way to prevent Gonorrhoea and Syphilis is to keep away from prostitutes, both professional and non-professional.

(b) Antiseptic washes and other preventive measures are not reliable.

Beware of advertising specialists who claim to cure "Nervous Debility," "Lost Manhood," "Enlarged Veins," "Blood Poison" and "Private Diseases of Men."

Night emissions, or wet dreams, if not too frequent, are natural in men. They are not a sign of "Lost Manhood." These advertising specialists get large sums of money for treating diseases which do not exist.

Patent Sex Medicines are useless, and cause a waste of money.

How You Can Help.

1. In justice and chivalry to our daughters and wives and unborn children, and our sisters, do not risk exposure; stand for the same standard of honor for men as for women.

2. Protect boys from harmful ideas and smutty stories.

3. Send for circulars of information and help distribute them.

(a) For young men; (b) for older boys; (c) for younger boys; (d) for women; (e) for young girls; (f) for parents.

DEPARTMENT OF PUBLIC HEALTH,
1085 Mission St. San Francisco, Cal.

FREE SEX ADVICE.

Free sex advice and free treatment can be obtained at the clinics of the following Medical Colleges:

University of California Clinic, 2d and Parnassus Ave., daily, 8:30 to 10:30 a. m.

Stanford University Clinic, Webster and Sacramento Sts., daily, 8:30 to 10:00 a. m.

Hahnemann Clinic, Sacramento and Maple Sts., daily, 10:00 to 11:00 a. m.

College of Physicians and Surgeons, 344 Fourteenth St., daily at 9:30 a. m.

San Francisco Polyclinic, 1535 Jackson St., daily, 8:30 to 9:30 a. m.

All correspondence treated confidentially. Letters cheerfully answered in plain envelopes.

Write to

THE ADVISOR,

Department Public Health, 1085 Mission St., San Francisco, Cal.

PUBLISHED BY ORDER OF THE STATE BOARD OF HEALTH.

Venereal Diseases.

Gonorrhoea (or Clap) Causes:

1. Most of all the blindness in children in the United States.
2. Many childless marriages.
3. A large proportion of all surgical operations upon the female organs.
4. Many innocent wives to become invalids for life.
5. Gonorrhoea often is not cured when it seems to be cured. The germs of gonorrhoea often remain hidden in the body ready to cause serious trouble even when the symptoms of the disease have apparently ceased under treatment. When not cured it may for a long time be contagious.

Syphilis (or Pox) is a Blood Disease which may be transmitted to wives and children, if not cured, and is likely to cause insanity, locomotor ataxia or total paralysis. Syphilis can be cured.

Prevention.

(a) The best way to prevent Gonorrhoea and Syphilis is to keep away from prostitutes, both professional and non-professional.

(b) Antiseptic washes and other preventive measures are not reliable.

Beware of advertising specialists who claim to cure "Nervous Debility," "Lost Manhood," "Enlarged Veins," "Blood Poison," and "Private Diseases of Men."

Night emissions, or wet dreams, if not too frequent, are natural in men. They are not a sign of "Lost Manhood." These advertising specialists get large sums of money for treating diseases which do not exist.

Patent Sex Medicines are useless, and their purchase is simply a waste of good money.

STATE BOARD OF HEALTH,
Sacramento, California.

LANE MEDICAL LECTURES.

The next course of Lane Medical Lectures will be given by Dr. Frank Billings of Chicago. Dr. Billings will speak on "Focal Infection." The five lectures will be delivered the evenings of the week of September 20th to September 25th, 1915. Dr. Billings has also agreed to give some clinical demonstrations.

OFFICIAL DELEGATES TO THE PAN-AMERICAN MEDICAL CONGRESS.

Colonel William H. Arthur, Medical Corps, San Francisco, California.
 Guy L. Edie (Colonel), Medical Corps, Letterman Hospital, San Francisco, California.
 Surgeon General William C. Braisted, Stewart Hotel, San Francisco, California.
 Surgeon General Rupert Blue.
 Assistant Surgeon General J. W. Kerr.
 Dr. Enrique B. Demaria, Argentine Republic.
 Dr. Fernandez Mendez Capote, Cuba.
 Dr. Juan Padilla Matute, Guatemala.
 Dr. Carlos Morales Macedo, Peru.
 Dr. Carlos Leiva, San Salvador.
 Dr. Francisco Risquez, Venezuela.
 Dr. Alvaro Ramos, Brazil.
 Dr. Rocha Vaz, Brazil.
 Dr. Pedro de Obarrio, Panama.

CITY TUBERCULOSIS CLINICS.

Following in the footsteps of New York, Chicago, Philadelphia, Baltimore, Detroit and Milwaukee, Los Angeles at its recent election has started a division of tuberculosis in the health department; and with the two to one vote of the citizens there the city will have one municipal tuberculosis nurse for every 100 cases that are registered, if they need supervision and care.

Other cities in California would do well to consider the advisability of following in the footsteps of Los Angeles. It was shown very clearly in the vote the attitude of the voters toward the establishment of this municipal tuberculosis nursing, and the investment in a public health way to a community cannot be measured.

Already in cities where the death-rate from tuberculosis has been very high there has been a noticeable decrease in the tuberculosis death-rate due, not only to the recovery of many cases which had been under the supervision of the nurses, but also in the prevention of new cases developing.

Los Angeles now has two clinics, and a night clinic is soon to be opened. Two hundred and fifty thousand dollars has recently been appropriated for a county sanatorium. Provision will be made in this sanatorium, which is the last word in sanatorium construction, for cases that can pay a dollar a day, but who cannot spend an indefinite length of time in an expensive private sanatorium.

The city will be districted, and as many nurses as are needed put into a district. They will be made responsible for the conditions in that district and will co-operate with the housing commission, and the new method of cleaning houses where there have been cases of tuberculosis will be adopted. The old way of fumigating will be done away with and the methods used in New York, and other places, will be adopted. "It is an extremely simple method," said one of the nurses in a recent interview. The city supplies, instead of an expensive fumigating machine, two strong people who go in with plenty of soap and elbow grease, and the place is thoroughly scrubbed and cleaned and left open for the sunshine to complete the process.

There will be a card index made of houses in which there have been cases of tuberculosis, and anyone wishing to learn whether the house they

are moving into has been properly cleaned, can call up the health department and be assured that they are not moving into a house or apartment that has become infected from a case of tuberculosis.

This, in itself, since there are thousands of new cases on record that have contracted tuberculosis from houses that have not been thoroughly cleaned, ought to make the taxpayers feel that there was an opportunity for them to feel that every vote cast for the nurses' ordinance meant protection for their families.

Recently, from Cook County Infirmary in Chicago, comes an extremely interesting article from a young man whose family in 1899 moved into a farm house in which previously two families, harboring far-advanced cases of tuberculosis, had occupied the same house. The man, then a lad of thirteen, was exposed to house infection until he was eighteen years of age, when the family moved away. At 23 "the break" came in the form of glandular and pulmonary trouble, and he did what was thought to be effective in those days, tried climate without care; and for five long years he went from Texas to Louisiana and Montana, chasing the cure; finally when he returned to his home he weighed a little over 100 pounds. With little prospect of recovery he entered the Oak Forest infirmary in November, 1914. He has reversed the odds and is winning the fight. His weight has gone up to 180 pounds, he has lost all active symptoms, is doing four hours' work each day, and is fast approaching an arrest of the diseased condition. Last month, thinking his experience would be valuable to his fellow patients, he requested the head physician to allow him to speak to the 660 others who were in the institution.

The State Association for the Study and Prevention of Tuberculosis mentions this case to show what institutional care, when properly given, means to any one suffering from pulmonary tuberculosis, and the opportunity of the municipal nurse is to find these cases; and until our hospitals are large enough to accommodate those people wishing to be placed in an institution, to try and teach them hygiene and sanitation, and keep the rest of the family from becoming infected.

Los Angeles in the past year has expended a great deal of money for a great many different things; but we say unreservedly, that the dividends from the recent action of the voters cannot be reckoned; and we advise every city in the state to watch the work in Los Angeles and to follow her example.

NEW MEMBERS.

Heiges, Laurence E., Lompoc, Cal.
 Brusco, Henry D., San Francisco.
 Howard, J. L., San Francisco.
 Miner, Henry Nelson, Colfax.
 Davis, Walter W., Brea, Cal.
 Diepenbrock, Anthony B., Sacramento.
 Liles, Lester McKesson, Santa Cruz, Cal.
 Bush, B. H., Santa Cruz, Cal.
 Bush, I. C., Santa Cruz, Cal.
 Hasson, D. W., Buena Park, Cal.
 Bryan, Geo. Corbin, Fullerton, Cal.

DEATHS.

Brumfield, W. C., (died years ago in Porterville, Cal.).
 Smiley, Walter C., Beaumont, Cal.
 Lengfeld, A. L., San Francisco.
 Downing, Wm. G., Suisun.
 Neumeister, A. E., Morgan Hill.
 Earle, Chas. Henry, Los Angeles.
 Ferrin, J. A., Half Moon Bay, Cal.
 Bicknell, Fred'k. T., Los Angeles.